

LOCAL NETWORK RELOCATION OF SELECTED EVENTS FROM THE EHBGT5 DATABASE

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GENERAL PROCEDURE

We relocated 596 events from the EHBGT5 database using available local stations at distances up to 300 km. Stations beyond 300 km were not used for location but were associated by making their phase arrivals nondefining. Two solutions per event were generally determined, first by using all phases, and secondly by only making first arrivals (P only) defining. Events were selected from a prioritized list covering 40 geographic regions in Europe, the Middle East and North Africa. The procedure for event selection required choosing the largest, best recorded events in order of descending magnitude and number of arrivals, and with depths less than 40 km. Up to 25 events per geographic region were relocated.

Locations were computed by using a graphical user interface (GUI) program to run version 1.1 of LocSAT. The GUI, named “Locate”, allows interactive processing of event solutions with both input and output in CSS3.0 format. Four output files were produced per location: origin, origerr, arrival, and assoc tables. These CSS3.0 flat files, excluding the “arrival” table, were converted to Oracle dumps and submitted to CMR for installation in their databases.

LocSAT input parameters follow the convention used at CMR, except that no SSSC corrections were applied. The “deltim” parameter (standard deviation of arrival time) found in the “arrival” table was always set to a value of 1.0 in the EHBGT5 database.

The EHB data consists of “groomed” ISC and other data in which the following regional phases are generally identified: Pg, Sg, Lg, Pb, Sb, Pn, and Sn. In the review process, most phase types remained unchanged, but many were renamed for consistency with epicentral distance, or if the time residual indicated that a change may improve the hypocentral location. For example, at very close distances, Pn or Pb phases were often changed to Pg. All Sg phases were renamed Lg since the IASPEI91 travel tables are not available for Sg. The phase types of first arrivals for P and S waves depended on epicentral distance and were generally assumed to be as follows:

Distance < 1.0 deg, Pg and Lg
Distance > 1.0 to < 1.4 deg, Pb, Sb or Lg
Distance > 1.4 deg, Pn, Sn or Lg.

The above general distance rules were somewhat flexible, however, and sometimes just Pg and Lg were used instead of Pb and Sb, as is the practice at the IDC. Some consideration was given to the original EHB phase types, since analysts in these regions (mostly Europe) may have greater familiarity with the seismicity and crustal structure. This is especially true for Pb and Sb which

were commonly picked in the EHB at distances between 1.0 and 1.4, as described above. As a general rule, we did not pick phases as Pn or Sn for distances less than 1.4 degrees, even when picked as such in the EHB database. Occasionally, a Pn or Sn was changed to Pg or Lg, respectively, at distances beyond 1.5 to 2.0 degrees if the residual fit better. Pg and Lg are known to be prominent arrivals in some parts of Europe, and may appear as the first arrival if earlier phases are weak.

Arrivals were made defining or non-defining on the basis of arrival time residuals. The residual limits were based largely on procedures used at the IDC, with an allowable excess of about 25% over the limits since regional crustal models are not applied, and the IASPEI91 tables have more error at regional distances. Later phases were made defining only if a primary arrival was also defining.

RELOCATION RESULTS

Table 1 provides statistical results including error ellipses of relocated events, and the mean distances between local network EHB locations and original EHB and ISC solutions.

Table 2 consists of a listing of 596 EHB events sorted by Geographic Region Number (GRN) showing the local network location results using all phases, including error ellipse parameters (semi-major, semi-minor axes and strike). The difference between the revised and original EHB locations are also given.

Table 3 consists of a listing of 594 EHB events sorted by GRN showing the local network location results for P only, including error ellipse parameters (semi-major, semi-minor axes and strike). The difference between the revised and original EHB locations are also given. Two events were rejected due to poor convergence.

Identical results for both the “all phases” and “P only” runs occur for 12 events due to the lack of later phases, but are included in the three Tables 1, 2, and 3. Therefore, a total of 582 events have uniquely different solutions for each of the two runs.

The ISC database was searched for events common with the first set of 163 largest events from the EHB database, including up to five events in each geographic region. At this time, the ISC database does not contain the two most recent events, and a third event did not have an ISC solution. The epicentral location comparison is therefore restricted to 160 common events, and the results are shown in Table 1 and Figures 6 and 7 below.

We identified 10 EHB events common to the Reference Event List 1.0 (REL1.0) currently displayed on the Group-2 web site. Only one event was classified as GT1 (No. 5 in table below). The nine other reference events were assigned GT5. Figures 15, 16, and 17 show differences between the REL1.0 locations and local network relocations using all phases, P only, and EHB locations, respectively. Figure 18 shows the difference between REL1.0 and ISC locations for nine common events (the most recent event is not currently available at ISC).

LIST OF 10 COMMON EVENTS IN EHB AND REFERENCE EVENT LIST 1.0

No.	Origin time	Latitude	Longitude	Depth	mb	ml	Source	GT
1	1997/07/02 03:20:02.720	42.6552		0.6728	3.40		ROCA	5
2	1998/02/24 10:12:33.154	36.8285		-4.5687	11.85		MULTIMAX	5
3	1998/04/13 05:55:41.792	37.2134		-4.1984	7.12		MULTIMAX	5
4	1998/04/14 02:13:03.269	37.2192		-4.2053	7.68		MULTIMAX	5
5	1998/05/06 02:53:00.100	46.2810		13.6960	5.10	3.99	ZIVCIC	1
6	1998/05/07 20:38:24.698	37.0570		-3.9325	5.26		MULTIMAX	5
7	1998/11/18 23:18:10.105	36.9579		-3.7773	7.63		MULTIMAX	5
8	1999/02/02 13:45:16.801	38.1194		-1.4779	0.00		MULTIMAX	5
9	1999/06/07 10:03:12.652	37.2295		-3.6998	5.40		MULTIMAX	5
10	1999/10/04 18:14:26.450	42.8887		0.6290	10.57		ROCA	5

Note that the seven events with source “MULTIMAX” were based on earlier relocations of IGN arrival data within 250 km distance.

TABLE 1: STATISTICAL RESULTS

(1) ERROR ELLIPSE FOR 596 LOCAL NETWORK EHB RELOCATIONS, ALL PHASES

Mean Semi-Major Axis: 7.45 km

S.D. Semi-Major Axis: 0.12 km

Median of Semi-Major Axis: 6.8 km

Range of Semi-Major Axis: 2.7 to 28.1 km

Mean Area of error ellipses: 130.9 km^{*2}

S.D. Area of error ellipses: 4.3 km^{*2}

Median Area of error ellipses: 99.3 km^{*2}

Range of Area of error ellipses: 19.4 to 812.2 km^{*2}

(2) ERROR ELLIPSE FOR 594 LOCAL NETWORK EHB RELOCATIONS, P ONLY

Mean Semi-Major Axis: 10.18 km

S.D. Semi-Major Axis: 0.14 km

Median of Semi-Major Axis: 9.6 km

Range of Semi-Major Axis: 4.5 to 28.5 km

Mean Area of error ellipses: 238.6 km^{*2}

S.D. Area of error ellipses: 5.6 km^{*2}

Median Area of error ellipses: 199.6 km^{*2}

Range of Area of error ellipses: 55.1 to 1146.1 km^{*2}

(3) DISTANCE BETWEEN 596 EHB AND LOCAL NETWORK LOCATIONS, ALL PHASES

mean dist: 5.56 km

s.d. dist: 0.20 km

median distance: 4.58 km

range of distances: 0.21 to 48.65 km

(4) DISTANCE BETWEEN 594 EHB AND LOCAL NETWORK LOCATIONS, P ONLY

mean dist: 5.43 km

s.d. dist: 0.20 km

median distance: 4.28 km

range of distances: 0.06 to 47.70 km

(5) DISTANCE BETWEEN 582 ALL PHASES AND P ONLY LOCAL NETWORK LOCATIONS

mean dist: 2.16 km

s.d. dist: 0.07 km

median distance: 1.78 km

range of distances: 0.04 to 14.63 km

(6) DISTANCE BETWEEN 160 COMMON EHB AND ISC EVENTS

mean dist: 5.09 km

s.d. dist: 0.36 km

median distance: 4.41 km

range of distances: 0.24 to 42.91 km

(7) DISTANCE BETWEEN 160 ISC AND LOCAL NETWORK EHB LOCATIONS, ALL PHASES

mean dist: 6.98 km

s.d. dist: 0.42 km

median distance: 5.76 km

range of distances: 0.20 to 31.02 km

(8) PHASE ARRIVAL STATISTICS BASED ON 596 LOCAL NETWORK EHB RELOCATIONS FOR ALL PHASES, DEFINING PHASES ONLY (DISTANCE < 300 KM)

total # defining arrivals: 22582

total # of renamed arrivals: 7567

percent of arrivals renamed: 33.5

number of non-Sg arrivals renamed: 4338

percent of non-Sg arrivals renamed: 22.4

(9) DISTRIBUTION OF ARRIVAL PHASE TYPES USED FOR RELOCATION

phase #arr percent

Pg	5674	25.1
Pb	2597	11.5
Pn	7221	32.0
Lg	3533	15.6
Sb	1366	6.1
Sn	2191	9.7

(10) DISTANCE BETWEEN 10 REFERENCE EVENTS AND LOCAL NETWORK EHB LOCATIONS, ALL PHASES

mean dist: 2.00 km

s.d. dist: 0.47 km

median distance: 1.34 km

range of distances: 0.46 to 4.30 km

(11) DISTANCE BETWEEN 10 REFERENCE EVENTS AND LOCAL NETWORK EHB LOCATIONS, P ONLY

mean dist: 2.53 km

s.d. dist: 0.69 km

median distance: 1.69 km

range of distances: 0.31 to 6.57 km

(12) DISTANCE BETWEEN 10 REFERENCE EVENTS AND EHB

mean dist: 3.95 km

s.d. dist: 0.84 km

median distance: 3.34 km

range of distances: 1.06 to 9.30 km

(13) DISTANCE BETWEEN 9 REFERENCE EVENTS AND ISC

mean dist: 7.55 km

s.d. dist: 1.54 km

median distance: 6.22 km

range of distances: 2.26 to 18.20 km

596 RELOCATED EHB_GT5 EVENTS, ALL PHASES

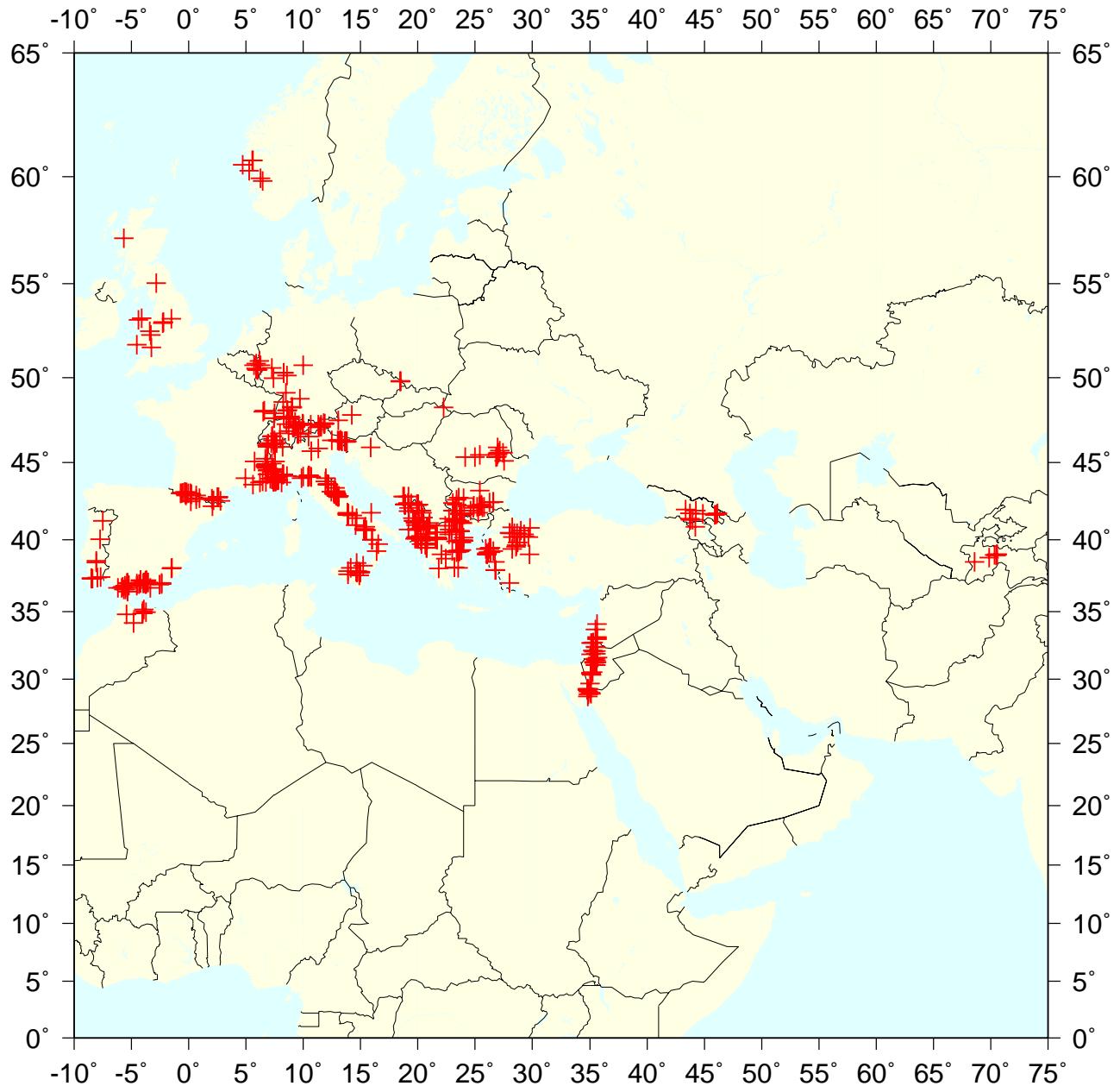


Figure 1. Local network relocations based on all phases for 596 events selected from the EHBGT5 database.

901 STATIONS WITH DEFINING ARRIVALS

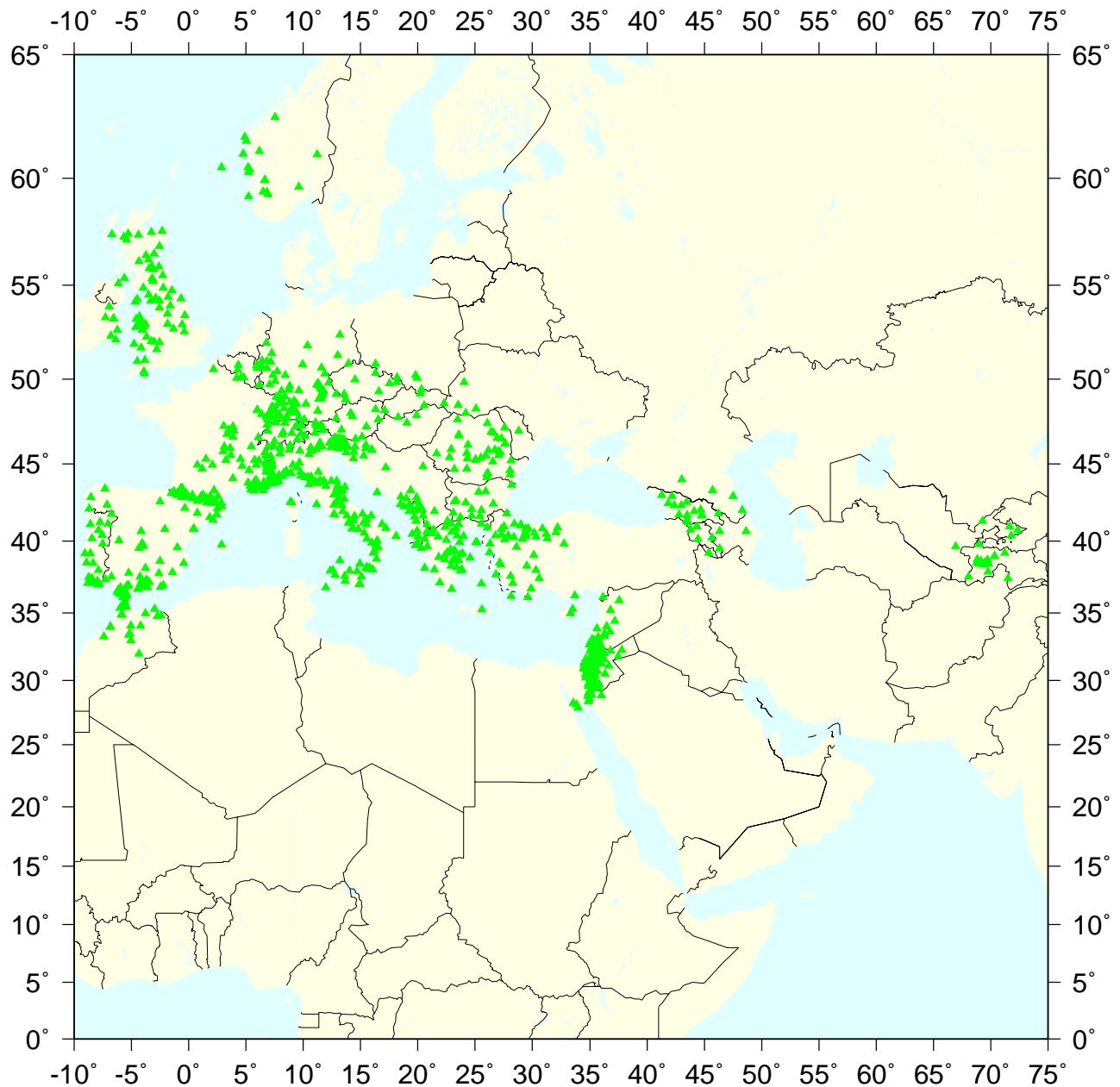


Figure 2. Location map of 901 stations with defining arrivals used in deriving the local network relocations of 596 events shown in Figure 1.

596 EVENTS, EHB TO LOCAL NETWORK EHB, ALL PHASES

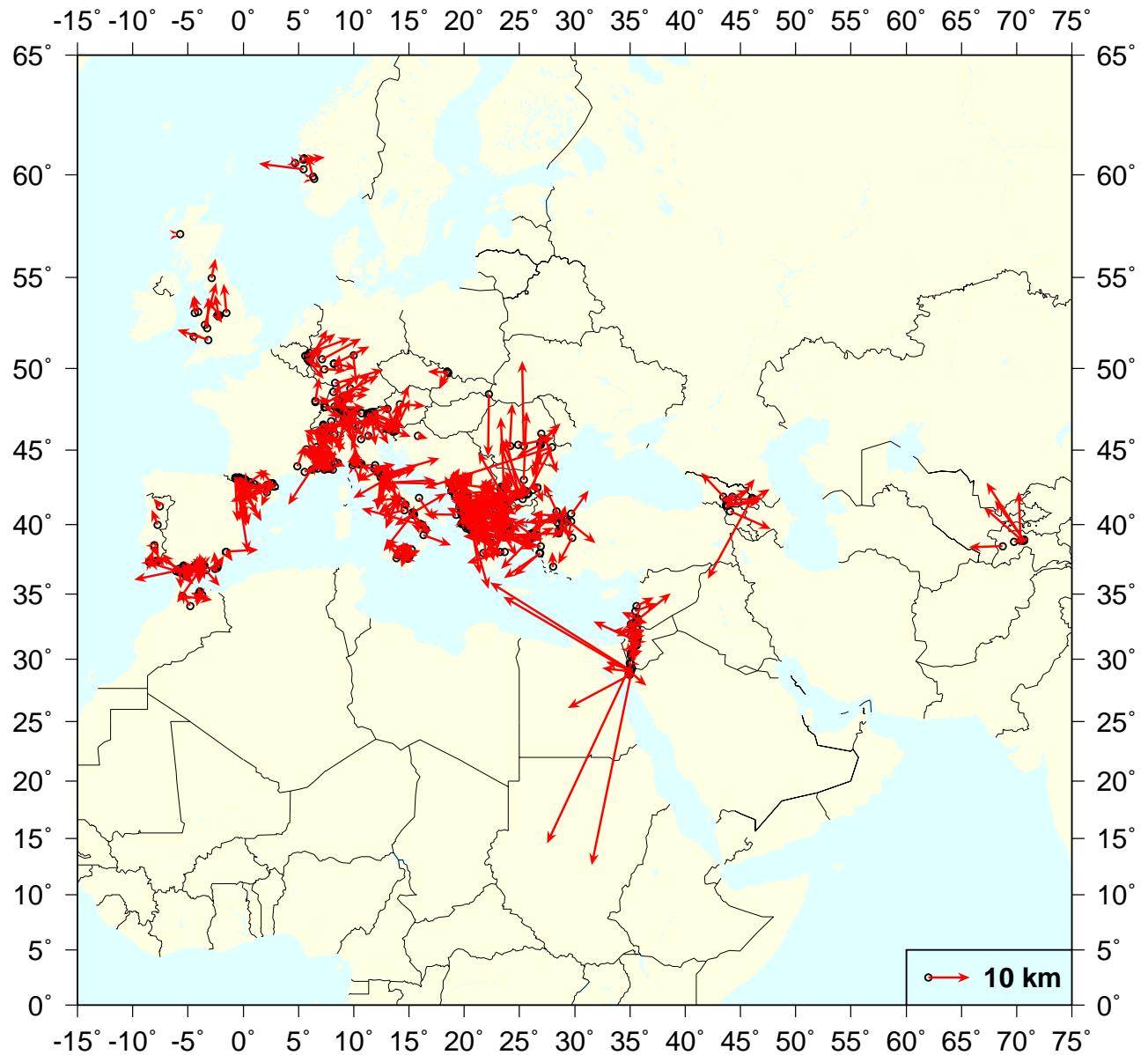


Figure 3. A comparison of the 596 EHB and local network relocations based on all phases. Black circles denote the EHB epicentral locations and the location-difference vectors point towards the new local network locations. The average difference between the two locations is 5.56 km. The large differences for some events near Aqaba may be due to mixed events in the EHB database.

594 EVENTS, EHB TO LOCAL NETWORK EHB, P ONLY

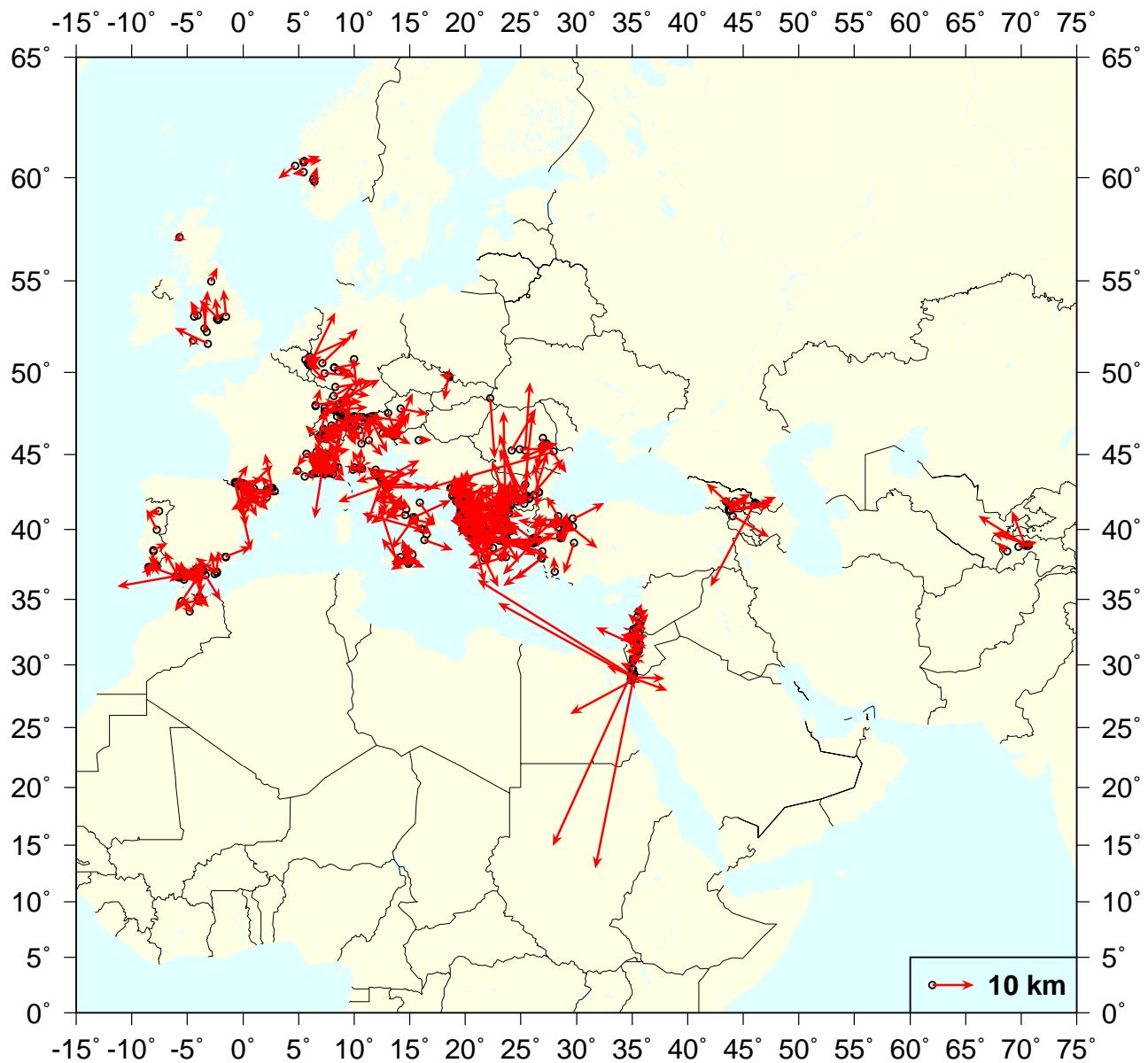


Figure 4. A comparison of the 594 EHB and local network relocations based on P only. Black circles denote the EHB epicentral locations and the location-difference vectors point towards the new local network locations. The average difference between the two locations is 5.43 km.

582 RELOCATED EVENTS: ALL PHASES TO P ONLY

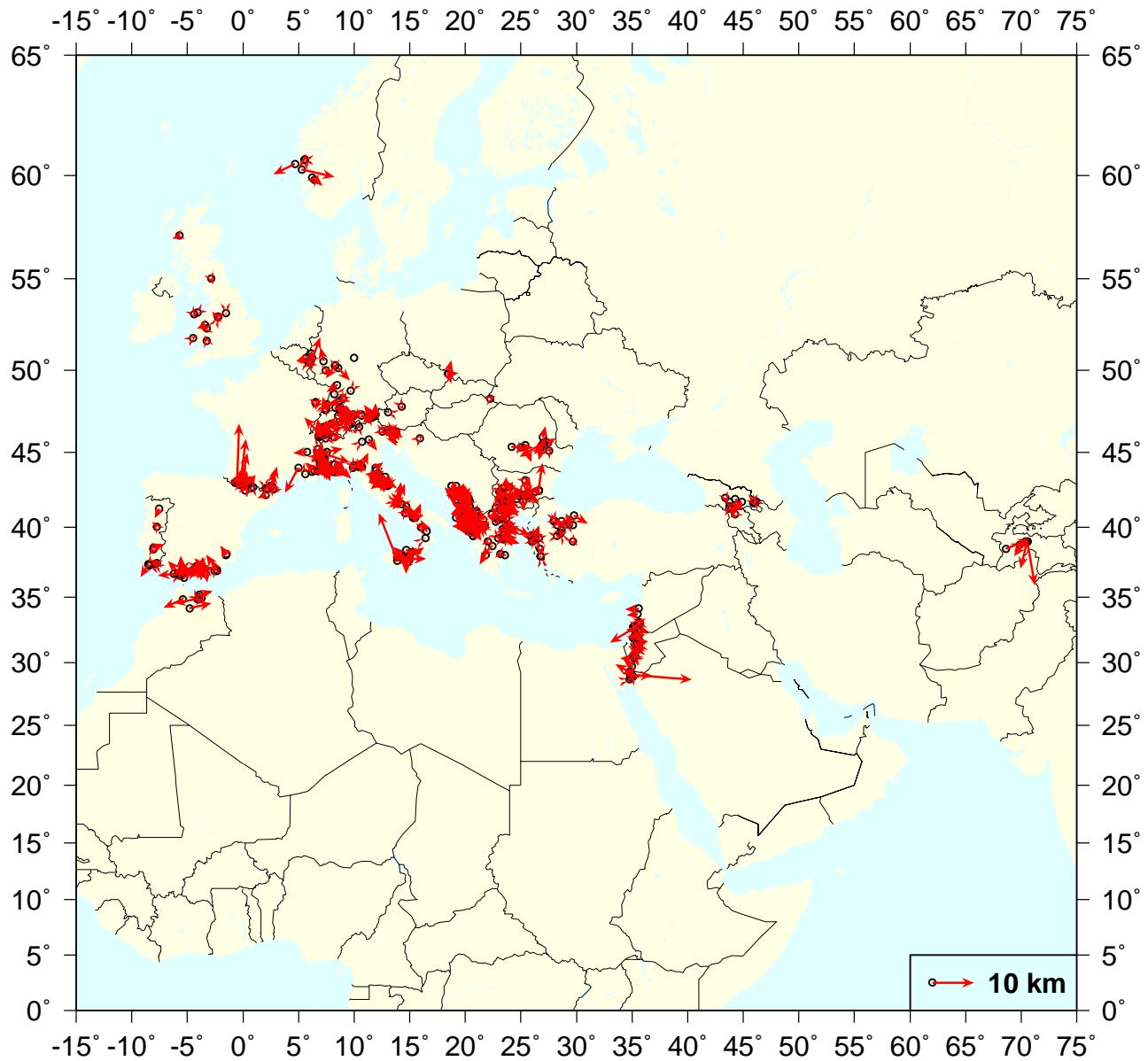


Figure 5. A comparison of the new local network EHB locations using all phases and those based on P only for 582 common events. Black circles denote the locations based on all phases, and the location-difference vectors point towards those based on P only. The average difference between the two locations is 2.16 km.

160 COMMON EVENTS, EHB TO ISC

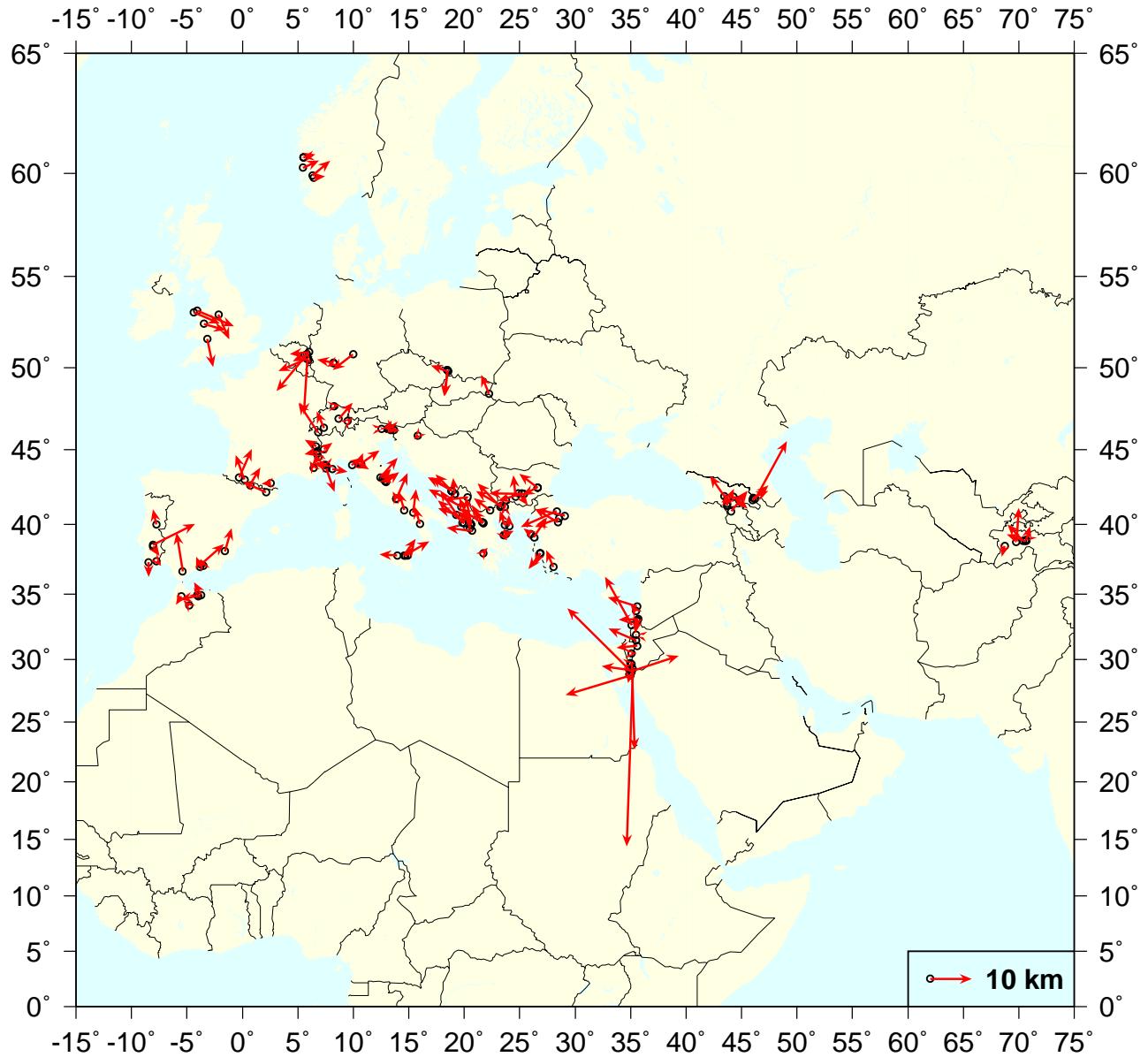


Figure 6. A comparison of the EHB and ISC locations for 160 common events. Black circles denote the EHB epicentral locations and the location-difference vectors point towards the ISC locations. The average difference between the two locations is 5.09 km.

160 EVENTS, ISC TO LOCAL NETWORK EHB, ALL PHASES

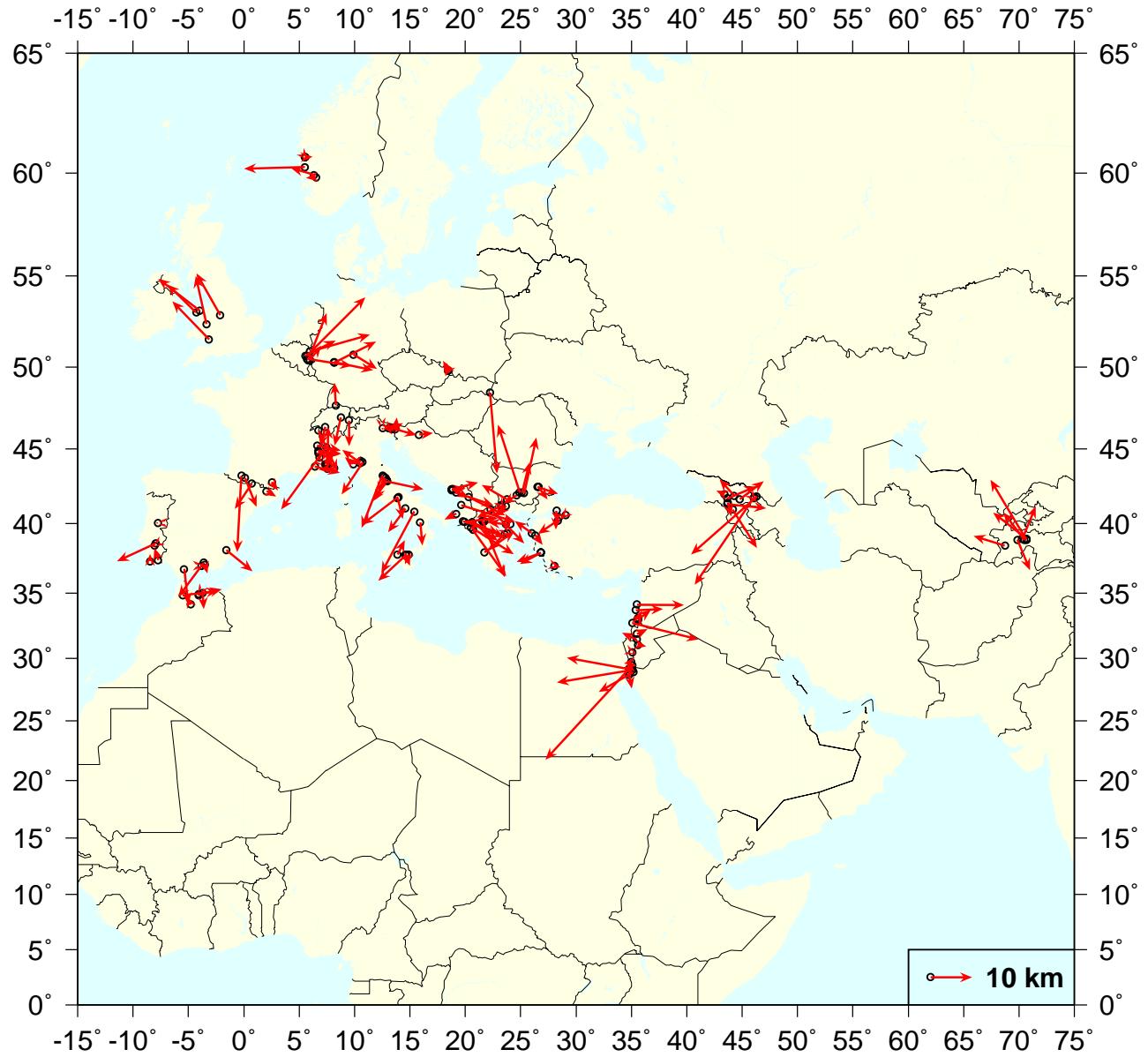
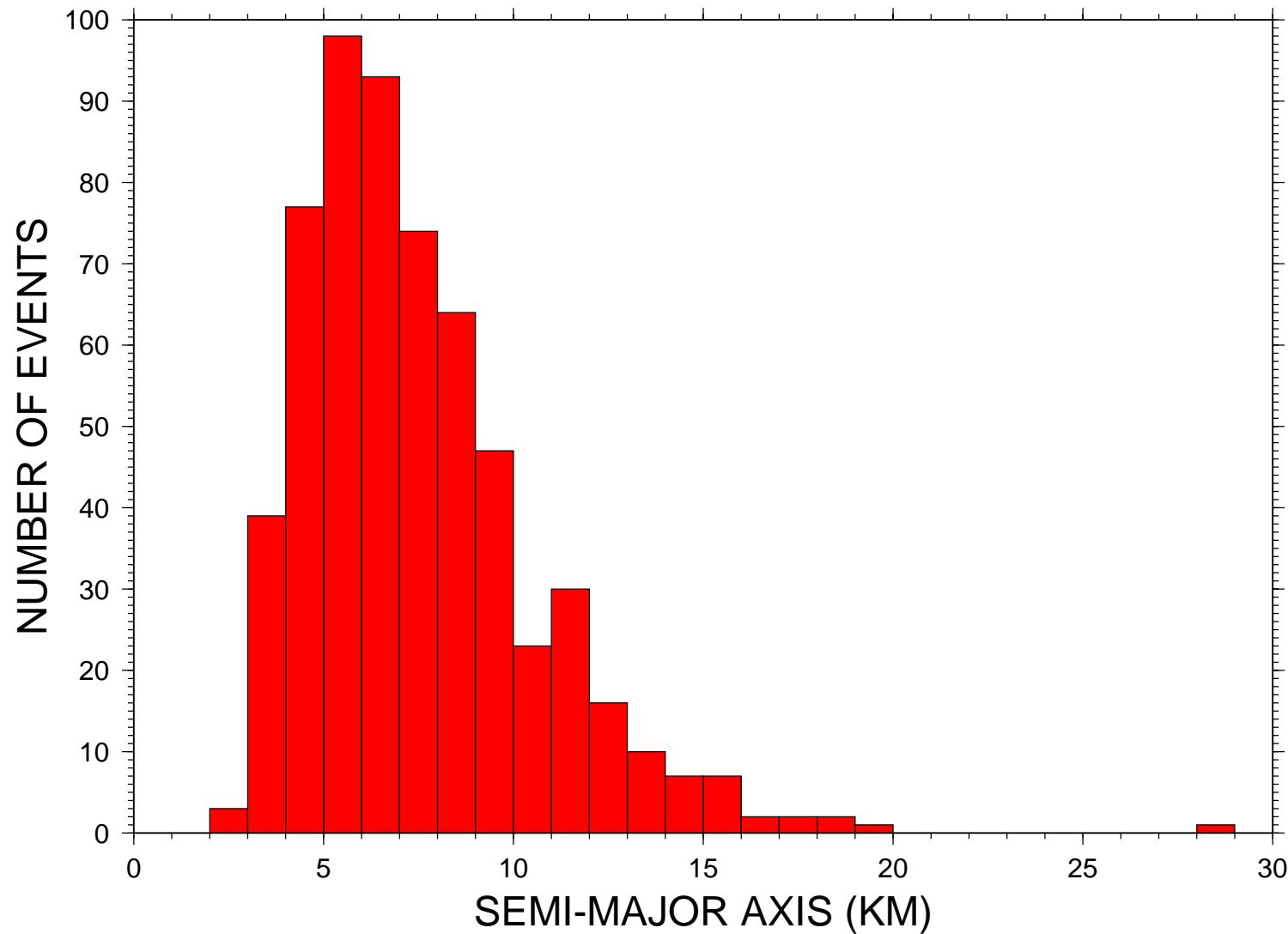


Figure 7. A comparison of the ISC and local network EHB locations based on all phases for 160 common events. Black circles denote the ISC epicentral locations and the location-difference vectors point towards the new local network locations. The average difference between the two locations is 6.98 km.

SEMI-MAJOR AXIS, 596 LOCAL NETWORK EHB, ALL PHASES



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Figure 8. Histogram showing the distribution of the semi-major axis of the error ellipse for 596 local network EHB locations based on all phases.

AREA ELLIPSE, 596 LOCAL NETWORK EHB, ALL PHASES

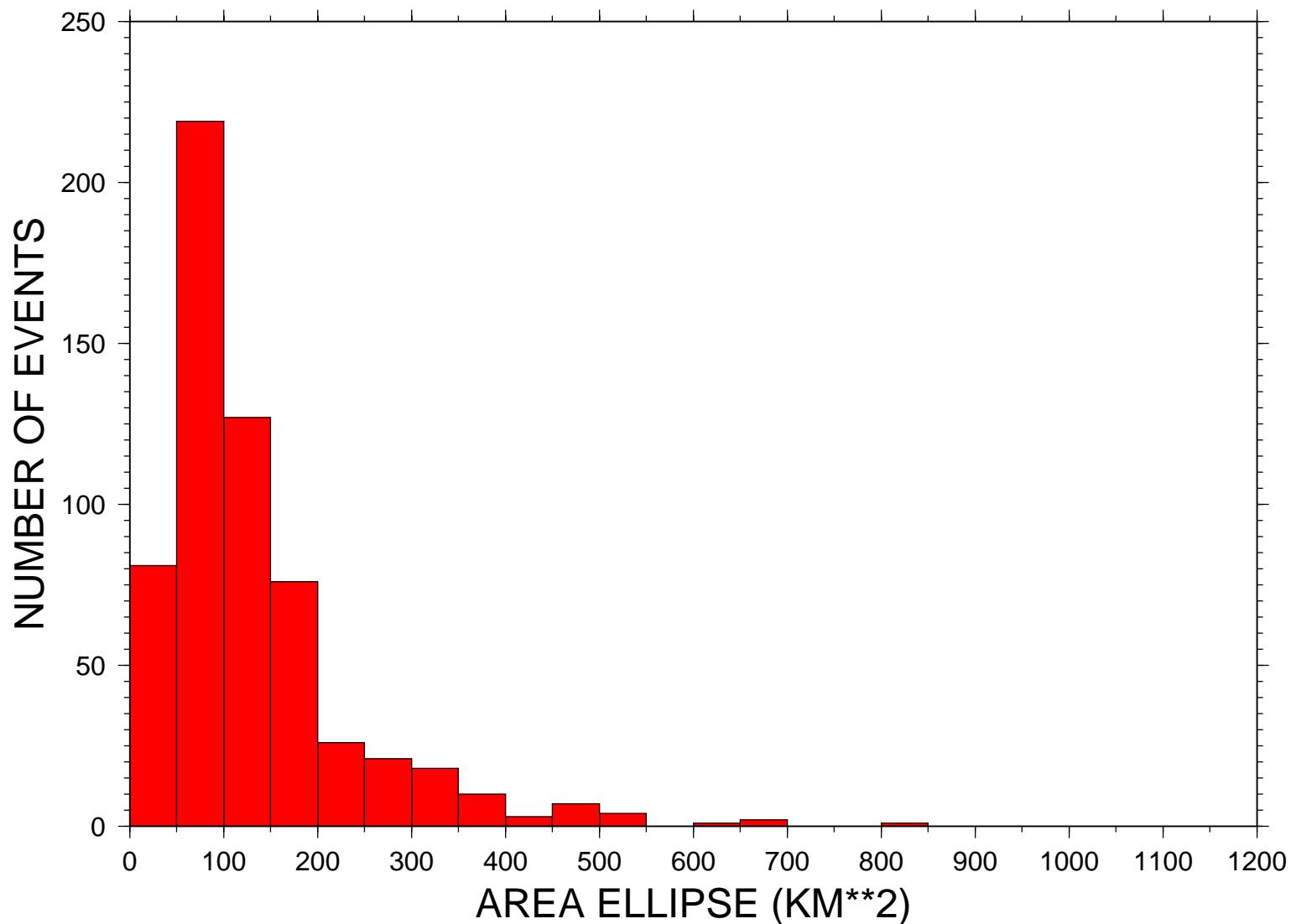


Figure 9. Histogram showing the distribution of the area of the error ellipse for 596 local network EHB locations based on all phases.

DISTANCE, 596 EHB TO LOCAL NETWORK EHB, ALL PHASES

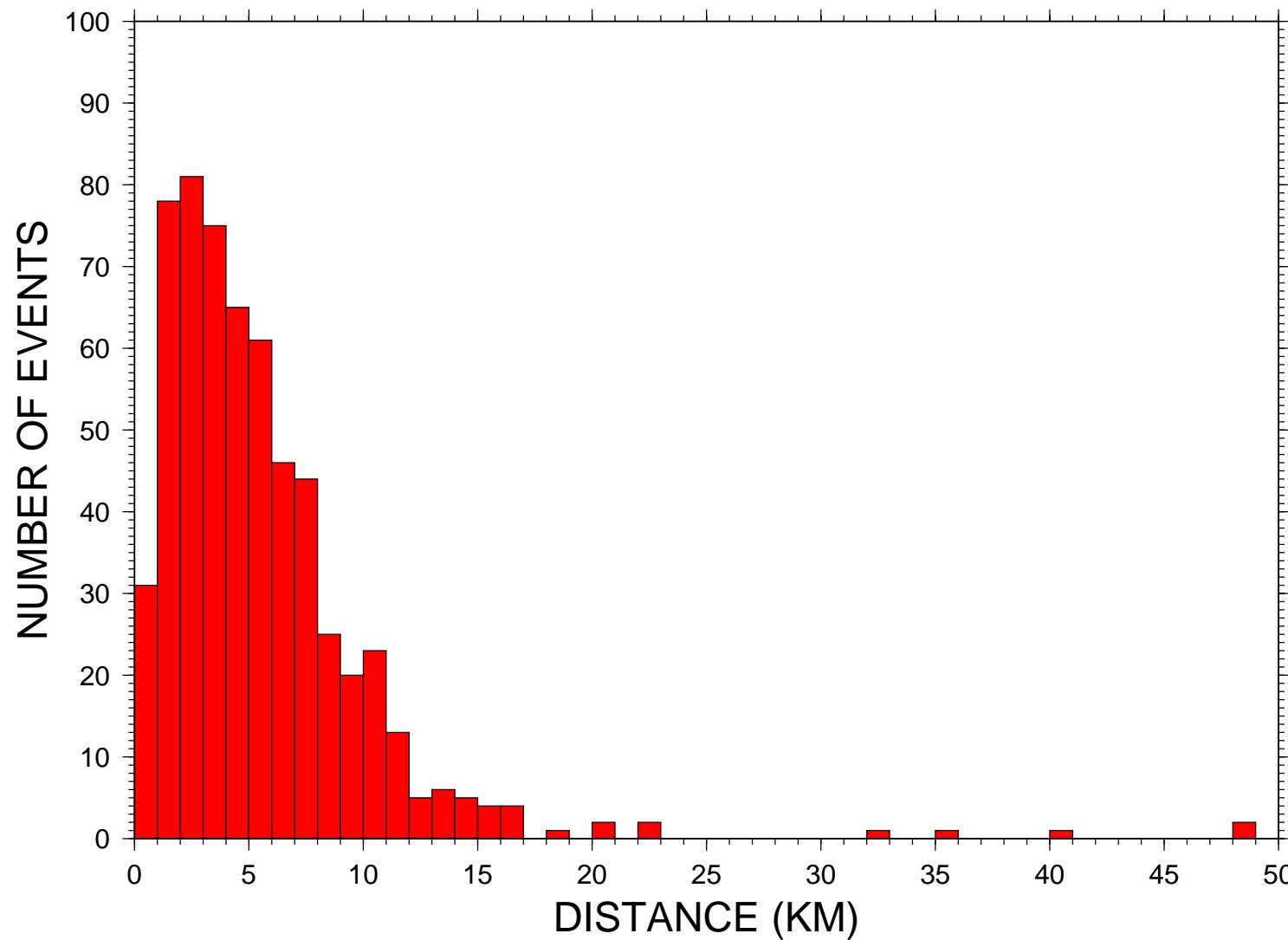


Figure 10. Histogram showing the distribution of distance separating the EHB and the new local network locations based on all phases for 596 events.

SEMI-MAJOR AXIS, 594 LOCAL NETWORK EHB, P ONLY

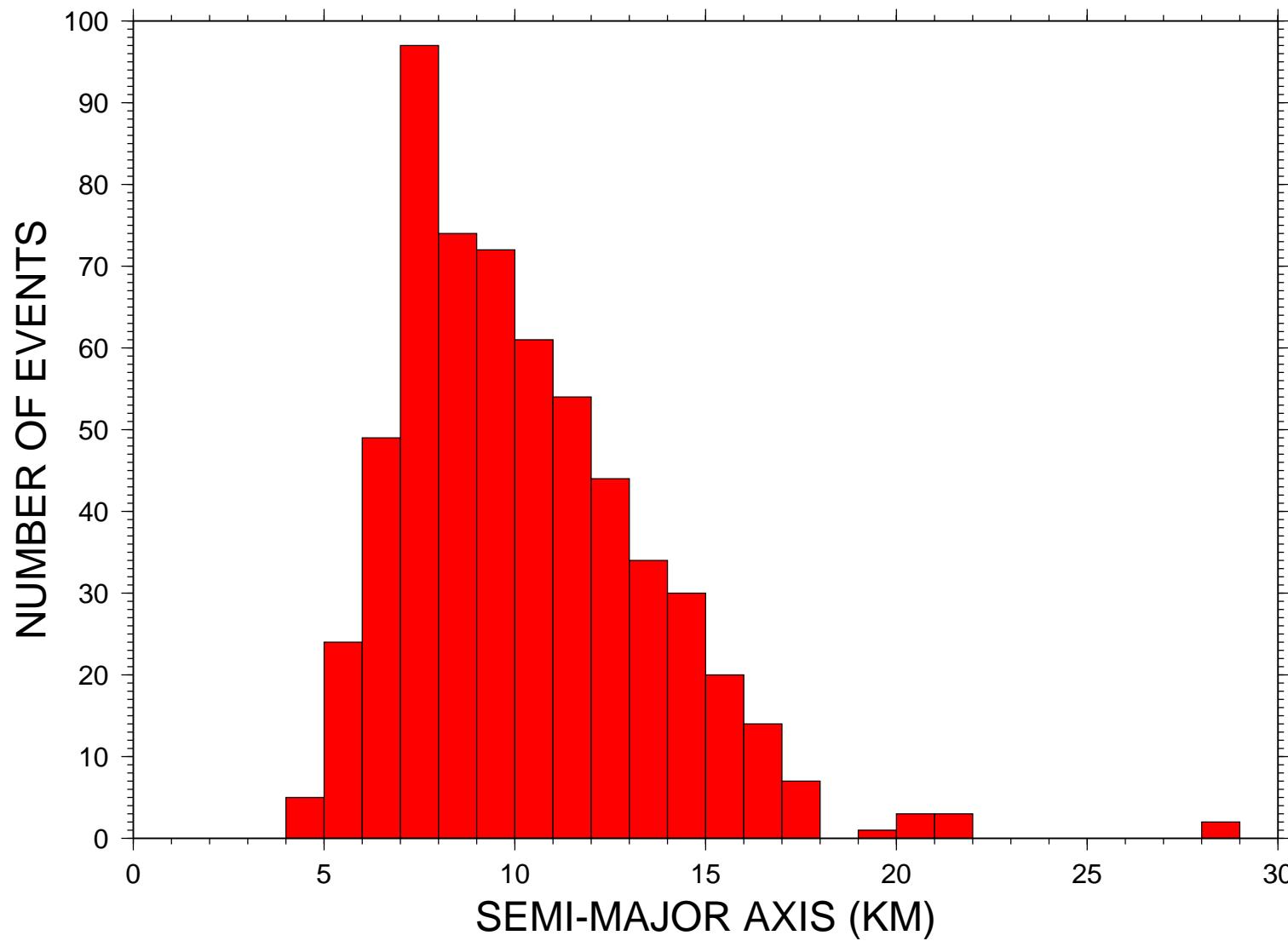


Figure 11. Histogram showing the distribution of the semi-major axis of the error ellipse for 594 local network EHB locations based on P only.

AREA ELLIPSE, 594 LOCAL NETWORK EHB, P ONLY

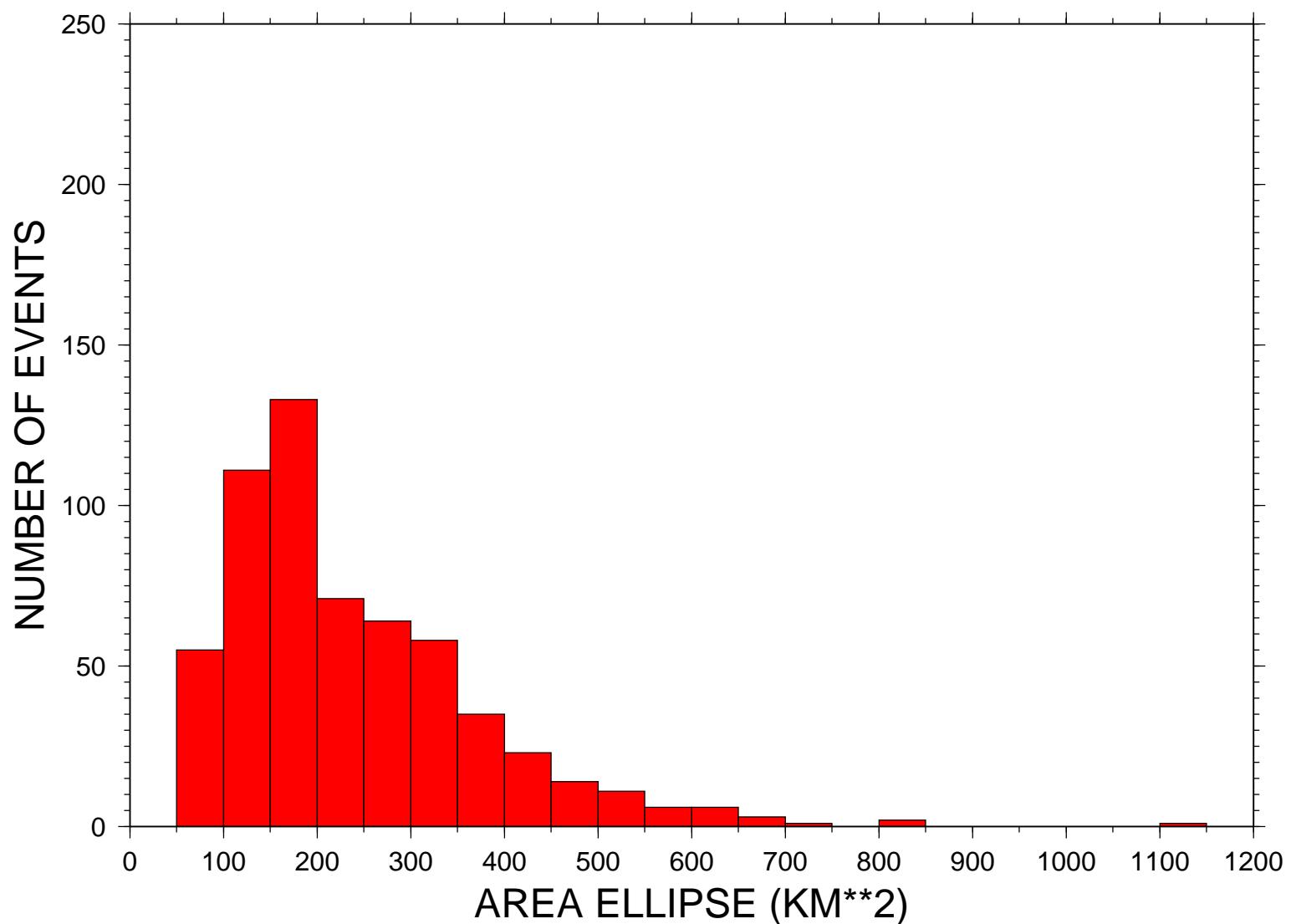


Figure 12. Histogram showing the distribution of the area of the error ellipse for 594 local network EHB locations based on P only.

DISTANCE, 594 EHB TO LOCAL NETWORK EHB, P ONLY

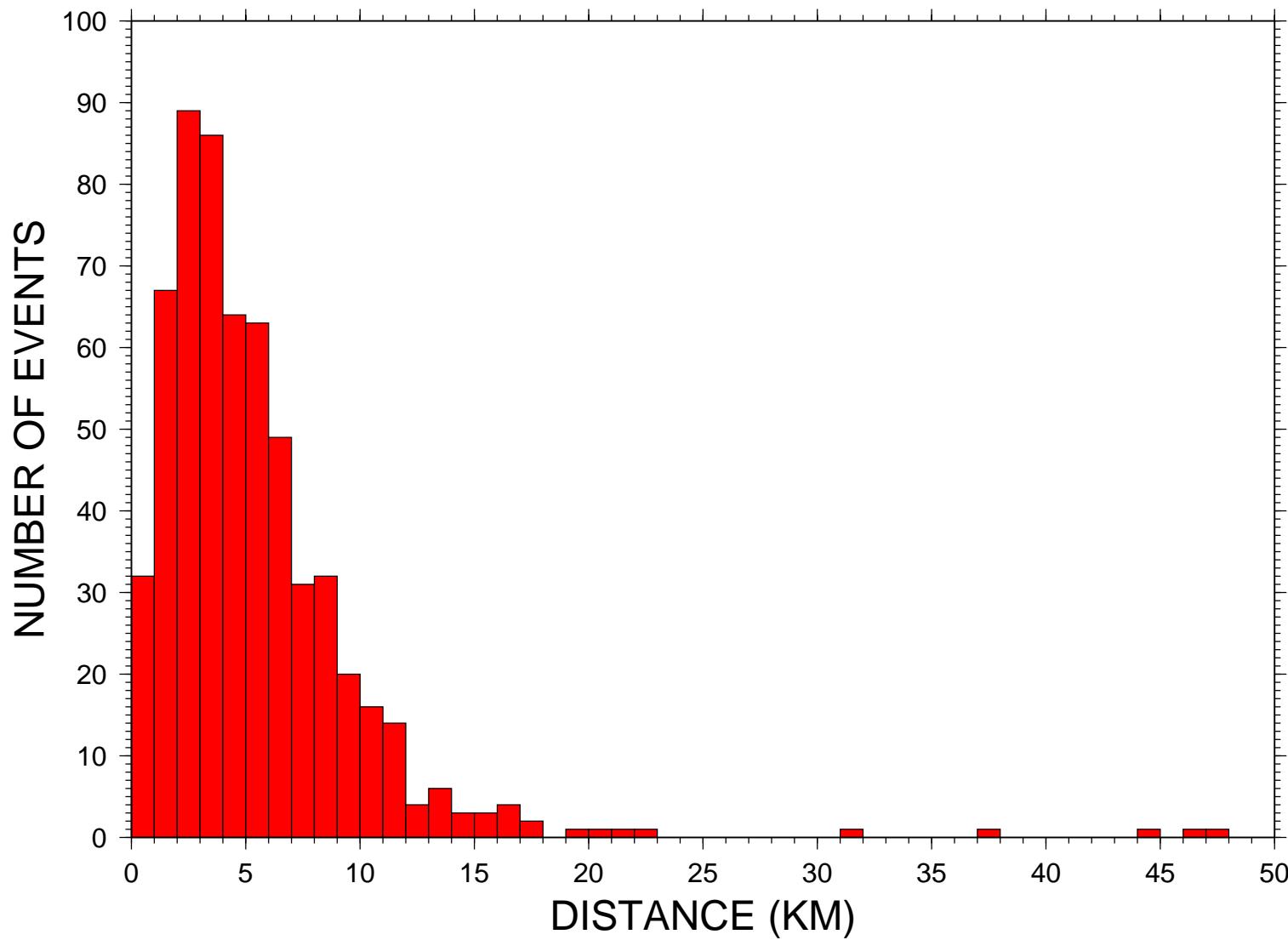


Figure 13. Histogram showing the distribution of distance separating the EHB and the new local network locations based on P only for 594 events.

DISTRIBUTION OF DEFINING PHASE TYPES

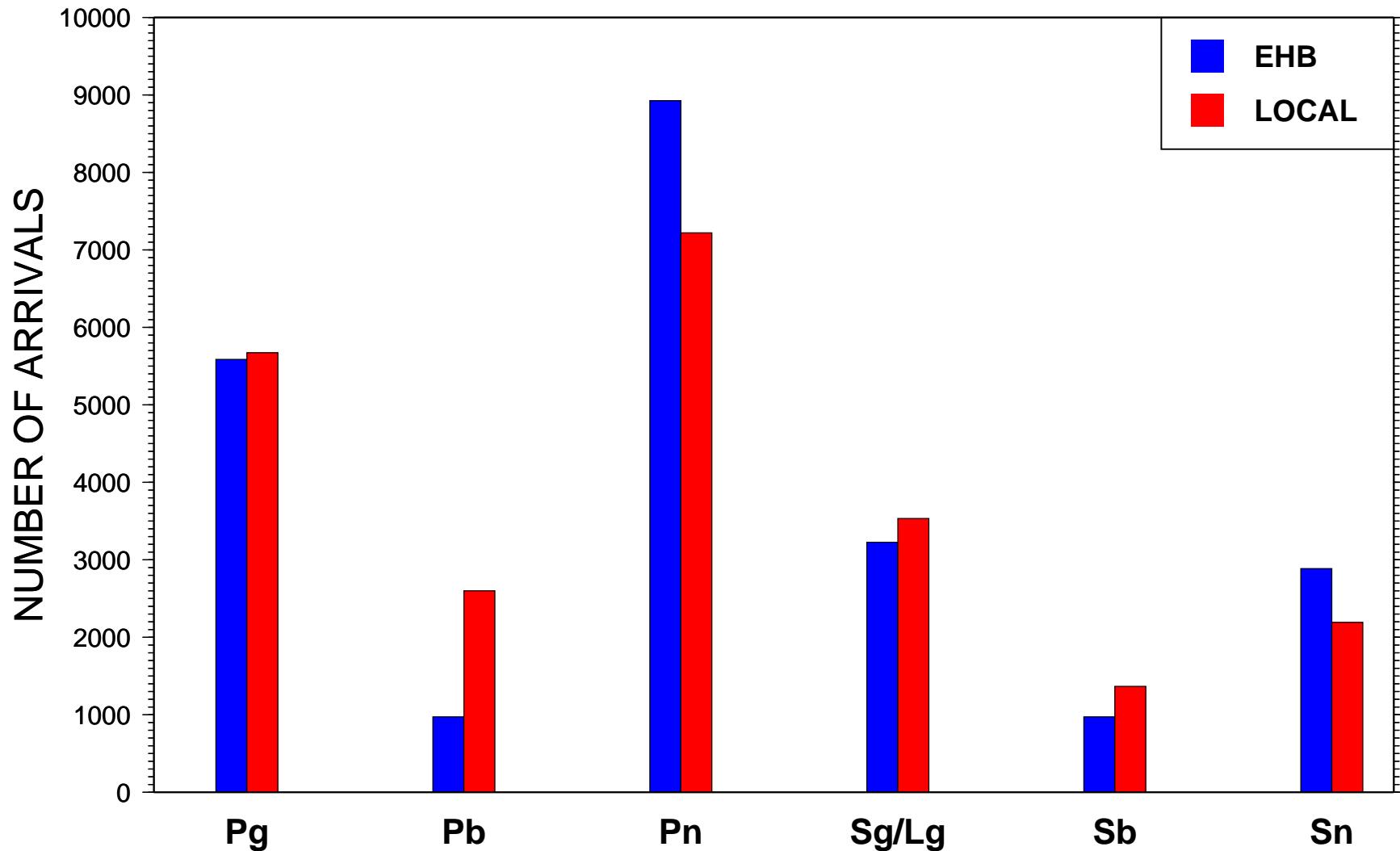


Figure 14. Bar chart showing a comparison of the distribution of 22,582 defining regional phase arrivals used for 596 local network EHB relocations and those in the original EHBGT5 database.

10 EVENTS, REL1.0 TO LOCAL NETWORK EHB, ALL PHASES

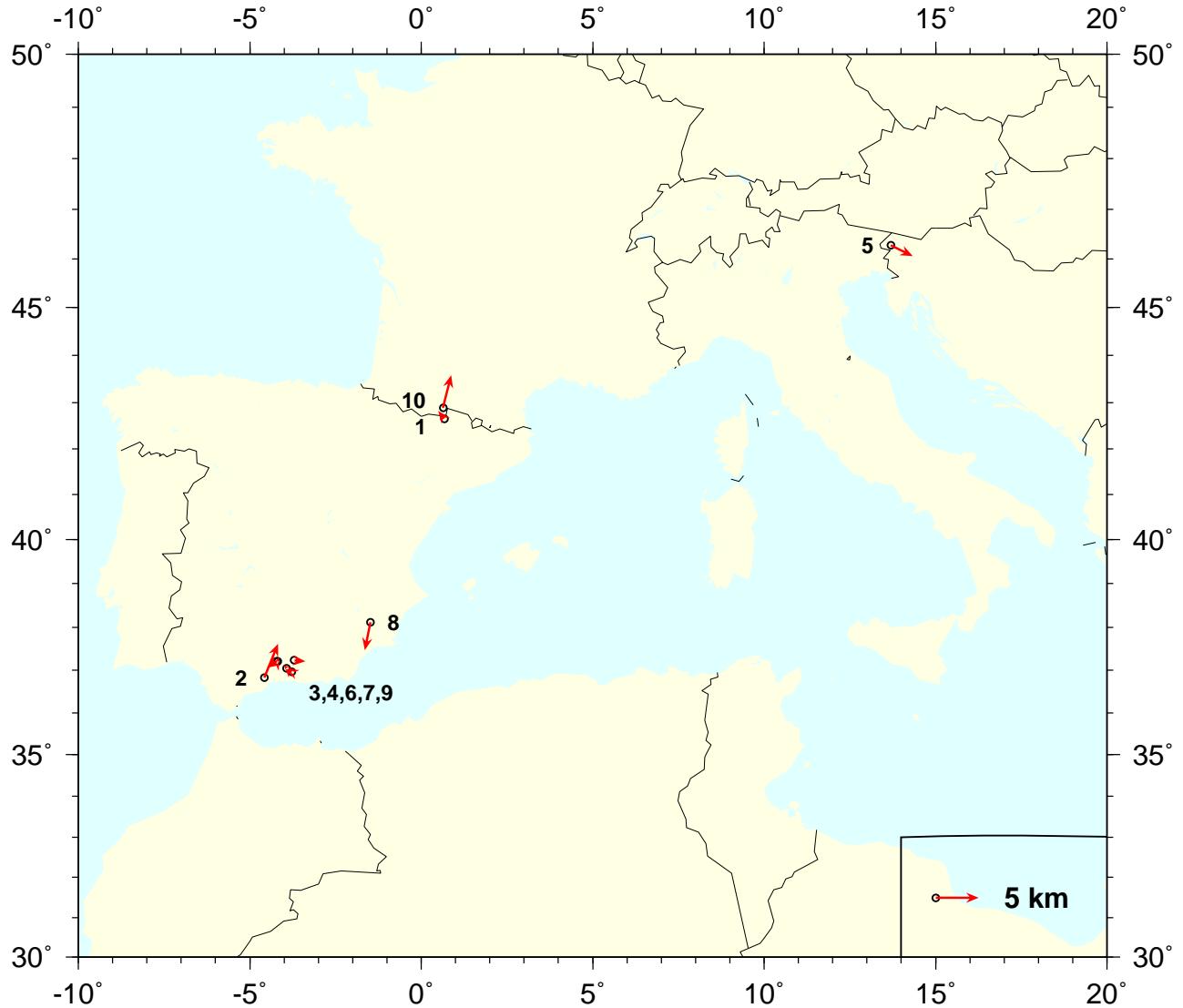


Figure 15. A comparison of 10 events common to the Reference Event List 1.0 (REL1.0) and local network EHB relocations based on all phases. Black circles denote the REL1.0 epicentral locations and the location-difference vectors point towards the new local network locations. The average difference between the two locations is 2.00 km. Events are numbered in chronological order.

10 EVENTS, REL1.0 TO LOCAL NETWORK EHB, P ONLY

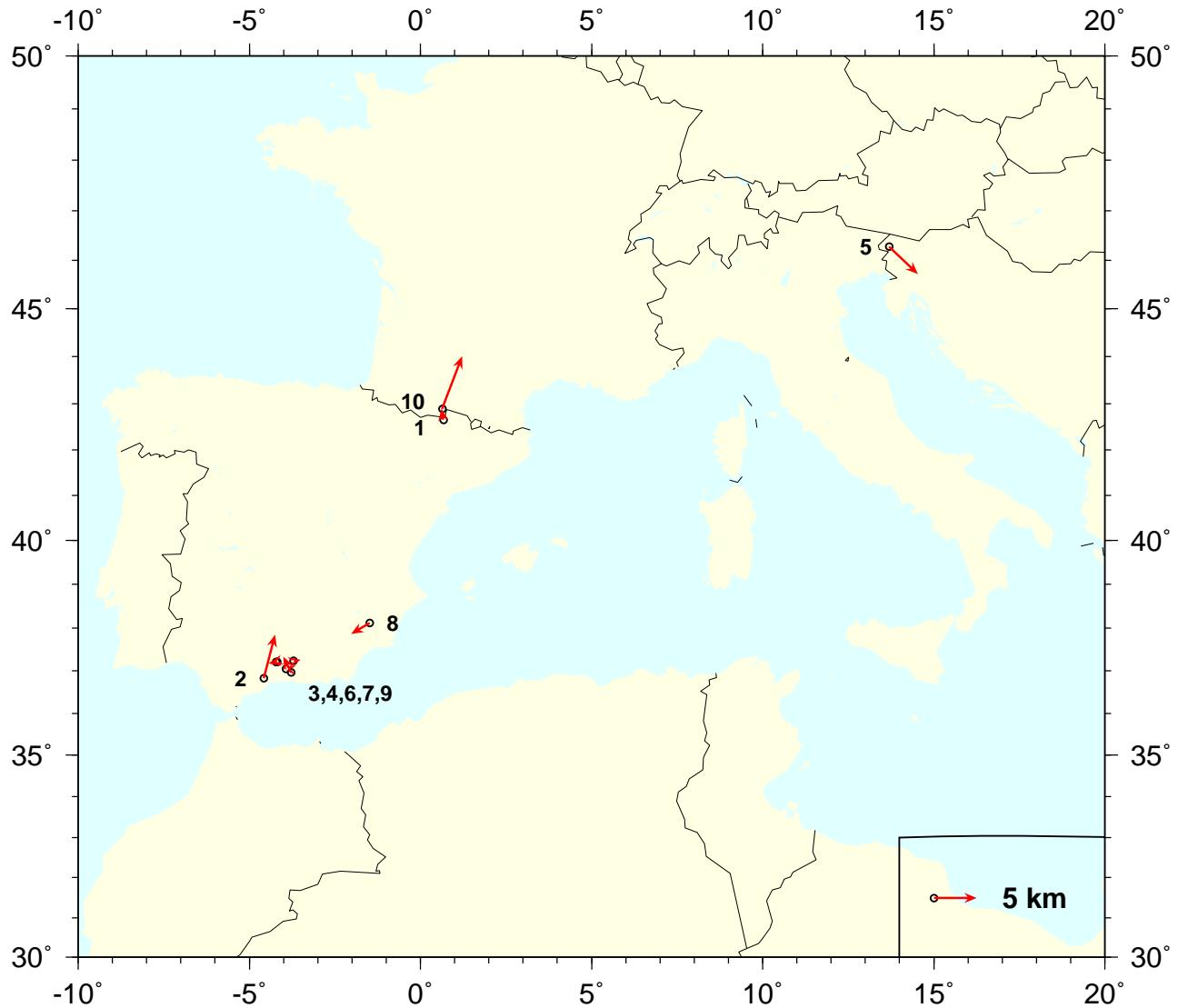


Figure 16. A comparison of 10 events common to the Reference Event List 1.0 (REL1.0) and local network EHB relocations based on P only. Black circles denote the REL1.0 epicentral locations and the location-difference vectors point towards the new local network locations. The average difference between the two locations is 2.53 km.

10 REFERENCE EVENTS, REL1.0 TO EHB

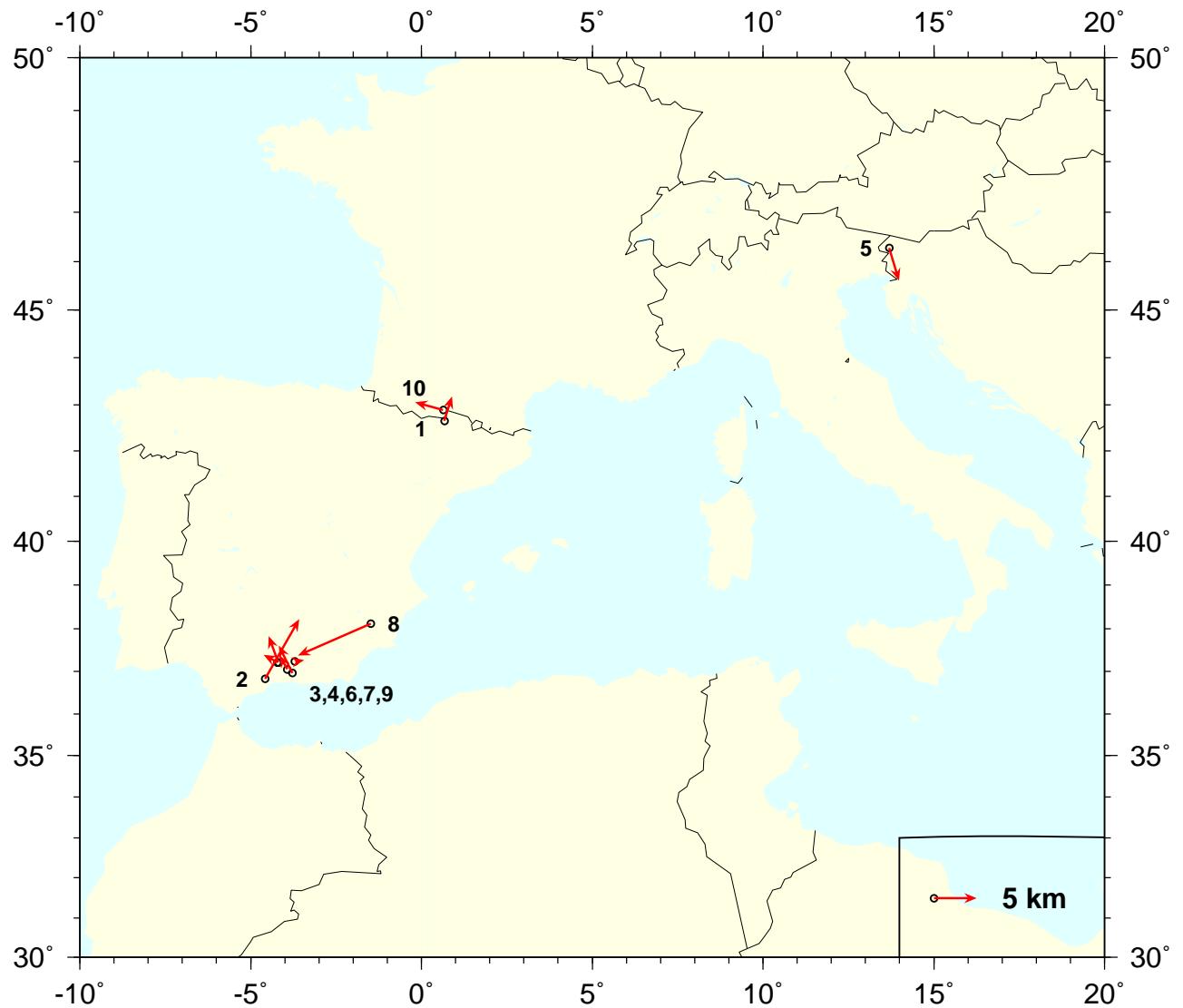


Figure 17. A comparison of 10 events common to the Reference Event List 1.0 (REL1.0) and EHB database using EHB locations. Black circles denote the REL1.0 epicentral locations and the location-difference vectors point towards the EHB locations. The average difference between the two locations is 3.95 km.

9 REFERENCE EVENTS, REL1.0 TO ISC

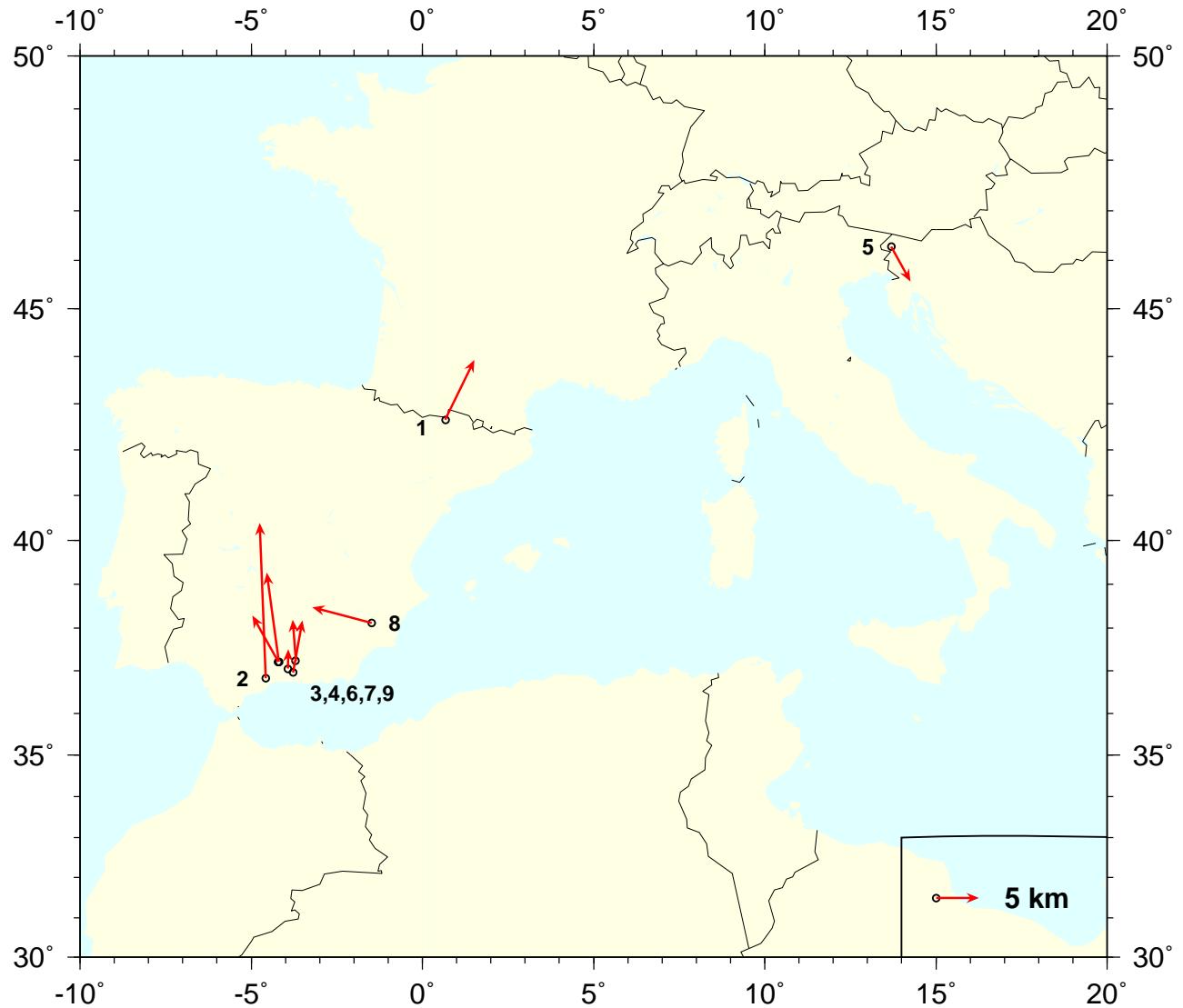


Figure 18. A comparison of 9 events common to the Reference Event List 1.0 (REL1.0) and ISC database. Black circles denote the REL1.0 epicentral locations and the location-difference vectors point towards the ISC locations. The average difference between the two locations is 7.55 km.

TABLE 2: LOCATION RESULTS, ALL PHASES

LOCAL NETWORK RELOCATIONS (ALL PHASES) FOR 596 EHBGT5 EVENTS,
SORTED BY GEOGRAPHIC REGION NUMBER (GRN)

GRN	EVID	JDATE	LAT	LON	ERROR_ELLIPSE			DISTANCE TO EHB KM
					SMAJ KM	SMIN KM	STRIKE DEG	
337	83824	1981054	41.6425	45.9122	8.80	5.90	27.60	22.23
337	96413	1983002	41.6898	46.0668	8.70	7.40	3.20	5.25
337	163946	1989351	41.7542	46.1549	11.40	8.30	161.80	8.33
357	92939	1982182	48.3089	22.2543	11.80	7.30	25.60	15.05
358	97646	1983052	45.3096	26.8336	6.90	4.00	114.90	6.48
358	99336	1983123	45.3544	26.9030	6.50	4.70	107.00	4.89
358	126813	1986117	45.4826	26.9707	7.50	6.10	95.30	7.54
358	148811	1988202	45.3111	24.9965	5.90	4.80	5.10	8.85
358	173897	1990287	45.9274	26.9776	11.30	7.10	116.20	10.64
358	184249	1991244	45.5373	26.9707	6.90	6.30	108.70	6.71
358	184253	1991244	45.5898	27.0412	9.90	6.40	51.90	5.36
358	195028	1992194	45.7095	27.1639	7.60	6.50	59.40	1.43
358	205957	1993127	45.4606	25.3965	8.30	4.30	155.10	20.49
358	244556	1995232	45.0741	27.5144	11.40	8.80	41.00	32.31
358	250797	1995332	45.3292	24.1430	6.40	5.30	18.20	10.33
358	263155	1996163	45.5742	27.4096	6.10	4.80	36.70	8.58
359	116415	1985094	42.1678	25.7736	8.60	7.20	128.00	13.10
359	135332	1987053	42.2602	24.8834	8.50	5.30	0.50	13.78
359	136409	1987088	42.2129	25.3516	10.60	7.20	164.00	14.74
359	136754	1987102	42.4856	26.5931	13.60	7.80	12.70	2.14
359	137363	1987127	42.4958	26.5950	13.40	8.00	28.80	3.84
359	146248	1988103	42.4350	23.0688	15.70	4.90	106.60	14.03
359	153160	1988358	42.1892	25.1710	9.00	4.80	130.80	6.82
359	157169	1989130	43.2035	25.4006	18.30	7.80	2.80	16.53
359	162483	1989299	42.4691	26.2627	8.90	5.90	179.70	8.67
359	163643	1989340	42.1171	24.8424	9.80	8.00	175.10	13.37
359	184612	1991252	42.2585	25.5283	15.30	9.60	88.70	2.78
359	184685	1991254	42.3017	25.5478	7.70	6.10	106.20	2.82
359	184788	1991258	42.2426	25.4127	7.00	5.70	57.40	2.71
359	252065	1995348	42.6269	23.3723	11.30	8.00	169.10	3.50
359	255046	1996033	42.7384	23.9818	12.50	8.90	10.70	2.45
359	259968	1996111	42.7592	23.5681	15.70	7.40	168.20	16.74
359	273770	1996324	42.1479	25.6530	8.70	6.90	87.60	11.62
359	290243	1997241	42.3264	23.3962	10.10	6.90	97.90	3.59
362	100393	1983167	41.7120	44.8552	14.10	8.00	109.60	6.58
362	103607	1983306	41.9250	44.2825	6.40	4.40	10.60	1.10
363	102198	1983240	41.7638	23.7100	9.30	4.30	142.60	13.45
363	103149	1983285	41.1955	23.1714	4.50	3.90	4.00	4.96
363	110259	1984226	41.7163	23.6816	8.10	4.40	145.40	6.91
363	137223	1987122	41.9211	24.6102	7.70	6.30	171.20	4.84
363	140993	1987273	41.7613	23.7000	7.90	4.80	121.70	6.20

363	153210	1988359	41.2311	23.2443	4.70	3.60	146.20	0.89
363	155394	1989072	41.1264	23.8976	7.80	5.60	143.00	4.92
363	160185	1989217	41.2002	23.1380	5.10	4.60	131.40	10.11
363	160541	1989230	41.1967	23.1242	4.50	4.20	120.00	1.16
363	166911	1990081	41.9294	23.0588	6.40	5.40	121.10	2.48
363	173109	1990261	41.9166	23.1298	7.50	5.60	125.20	3.56
363	176948	1991016	41.3397	23.2685	5.00	3.50	139.00	7.82
363	182130	1991174	41.2761	23.4178	4.30	3.70	121.90	0.90
363	182474	1991184	41.9168	23.3435	5.70	4.30	136.30	2.04
363	186024	1991298	41.2735	23.3146	4.90	3.60	115.40	6.09
363	204442	1993086	41.2016	23.1510	5.40	5.00	110.50	11.69
363	229385	1994330	41.7879	25.2450	7.80	6.50	15.80	6.65
363	232454	1995018	41.6721	24.0430	7.10	4.70	154.70	3.76
363	244332	1995229	41.9457	23.2331	7.20	5.50	126.10	3.75
363	278545	1997047	41.1191	23.8371	6.10	4.40	146.00	5.24
363	280577	1997077	41.6660	23.7738	7.30	4.90	134.80	3.15
363	281733	1997094	41.6484	23.8288	8.40	4.50	142.50	6.50
363	284284	1997133	41.2184	23.6349	6.30	4.50	108.60	3.57
363	284342	1997133	41.2102	23.6580	5.50	4.40	121.10	2.71
363	287963	1997198	41.7172	23.6598	8.40	5.10	140.90	4.28
364	101849	1983224	38.1418	23.1741	9.20	6.80	7.10	7.79
364	102636	1983262	38.7292	22.4414	9.10	5.60	45.50	3.07
364	105758	1984040	40.4928	21.6362	5.80	3.80	7.90	4.28
364	106017	1984050	40.5939	23.3775	6.90	4.90	66.60	7.87
364	112280	1984299	40.0671	21.6326	6.30	4.20	27.50	4.21
364	119351	1985211	40.3798	22.7305	7.00	5.80	169.50	7.40
364	151532	1988294	40.5188	22.9658	6.00	5.50	117.40	3.65
364	176010	1990355	40.9318	22.3975	5.20	4.80	52.40	6.74
364	233913	1995044	40.6846	22.7589	4.70	4.10	16.90	1.87
364	238058	1995123	40.5785	23.6531	6.60	5.40	39.10	3.24
364	238059	1995123	40.5797	23.6623	5.40	4.10	52.90	1.64
364	238076	1995124	40.5700	23.6463	7.30	5.90	38.40	5.61
364	238666	1995133	40.1612	21.6806	8.20	5.80	172.80	3.72
364	238836	1995134	40.0967	21.5586	5.50	4.00	170.40	3.66
364	238889	1995135	40.0712	21.6913	5.80	4.50	172.40	3.00
364	239060	1995136	40.0655	21.6573	6.20	4.00	169.90	9.62
364	239084	1995137	40.0384	21.7001	5.70	4.60	174.70	9.52
364	239088	1995137	40.0537	21.6429	5.20	4.00	173.70	2.60
364	239263	1995139	40.0336	21.6582	5.50	4.40	177.80	4.80
364	240360	1995157	40.1314	21.6386	5.30	3.90	161.10	3.45
364	242630	1995198	40.0860	21.6090	5.00	4.30	164.20	9.86
364	242663	1995199	40.1059	21.5997	5.60	4.50	160.50	9.53
364	242744	1995200	40.0793	21.6628	6.20	4.50	168.20	5.86
364	293287	1997294	39.0004	22.0590	8.90	6.40	154.20	4.91
364	316457	1999250	38.0776	23.5226	16.30	12.60	101.90	9.49
365	96941	1983021	39.2468	23.0027	6.90	4.40	81.20	4.81
365	105975	1984048	39.1772	23.3790	7.70	4.40	80.90	9.59
365	149747	1988224	39.9245	23.9211	10.70	7.20	117.00	0.37
365	149807	1988226	39.9374	23.9334	9.00	7.50	143.00	6.45
365	149941	1988229	39.9457	23.9303	9.60	6.40	132.70	7.73
365	155538	1989077	39.2306	23.5850	12.60	9.50	95.70	8.23
365	155545	1989078	39.2137	23.5783	9.40	6.20	91.20	2.94
365	155636	1989079	39.2197	23.5613	10.30	6.60	81.00	1.88
365	155649	1989079	39.2502	23.6642	12.60	7.60	67.00	8.52
365	156400	1989108	39.2447	23.6074	11.20	7.70	91.10	5.98

365	156824	1989120	39.2544	23.5308	10.10	5.40	81.40	6.10
365	156915	1989122	39.2421	23.4912	11.50	7.00	75.20	6.11
365	160614	1989232	39.9600	23.9519	9.50	8.80	172.60	4.41
365	165180	1990029	39.9269	23.8884	8.30	6.00	123.50	5.23
365	165230	1990031	39.1056	26.0151	13.80	10.90	63.20	3.24
365	167186	1990090	39.9298	23.9643	8.40	7.30	81.90	6.21
365	167187	1990090	39.9446	23.7980	11.80	8.20	99.60	1.54
365	167226	1990091	39.9498	23.9217	8.30	6.20	115.60	7.93
365	172606	1990246	39.9359	23.9778	8.50	6.70	140.50	3.80
365	182674	1991191	39.8853	23.3476	7.30	6.70	93.80	3.21
365	203202	1993055	40.1635	23.9808	7.30	5.70	109.00	7.06
365	219326	1994100	39.9747	23.6194	6.70	5.60	45.00	3.05
365	254923	1996030	38.5055	26.7110	17.20	8.80	77.40	20.76
365	267566	1996232	39.3907	25.9181	12.60	11.00	78.00	7.15
365	280759	1997080	39.3017	23.7881	6.20	4.50	157.50	2.52
365	293619	1997301	39.8076	23.7963	5.80	4.90	94.20	3.69
366	86708	1981202	40.2094	28.9104	9.50	6.70	111.90	3.63
366	91492	1982106	40.8021	29.7737	19.50	7.80	40.10	7.08
366	105389	1984021	39.3959	26.2740	15.30	10.50	103.20	7.04
366	121084	1985277	39.1517	26.1772	14.90	14.00	154.40	7.00
366	141625	1987300	40.4288	28.4363	11.60	7.30	132.70	7.58
366	146572	1988115	40.8358	28.2346	12.00	7.60	127.90	12.03
366	154124	1989027	40.3475	29.2821	12.60	10.10	131.00	9.28
366	160471	1989227	39.1612	26.3366	14.60	10.70	63.10	5.42
366	172953	1990256	39.5353	28.5400	12.30	8.80	31.00	2.37
366	178314	1991062	40.6152	28.9886	8.50	7.80	171.90	8.08
366	179829	1991108	39.2465	26.6060	11.50	8.50	5.40	2.29
366	190021	1992061	39.0202	26.0061	14.00	11.40	93.80	10.54
366	190023	1992061	39.0253	26.0403	16.10	9.70	130.40	3.42
366	190764	1992082	40.1720	28.2925	8.50	7.00	152.00	10.35
366	204061	1993077	40.4217	28.0277	10.30	6.30	163.40	1.66
366	204062	1993077	40.4578	27.9882	11.80	8.00	157.50	1.39
366	207515	1993157	39.3863	28.2490	13.30	9.60	41.40	22.76
366	217615	1994052	40.2052	29.3388	11.30	7.90	80.90	1.60
366	238964	1995135	39.4661	26.2507	13.20	9.50	78.40	5.85
366	244537	1995231	40.1763	29.6515	10.40	6.20	10.50	4.34
366	260478	1996120	39.0293	29.7279	8.40	8.20	47.00	7.17
366	272500	1996305	40.4293	28.6578	7.40	5.10	166.30	9.63
366	278615	1997049	39.4379	26.3308	13.40	8.00	37.20	3.42
366	283580	1997122	39.6194	28.5952	12.30	7.70	117.10	1.90
366	293087	1997291	39.8292	28.6900	8.30	7.20	101.90	5.60
367	39818	1973152	41.3161	43.9700	7.10	4.80	56.00	7.69
367	89983	1982024	42.0025	43.3790	9.60	7.40	97.80	7.92
367	103230	1983288	41.7448	43.7564	6.20	4.40	43.00	6.06
367	105326	1984019	41.3178	43.7837	5.60	4.10	76.60	9.05
367	127375	1986133	41.4076	43.7338	7.40	4.70	65.10	2.51
367	152752	1988342	40.8788	44.2336	6.90	6.20	51.80	10.65
368	172941	1990256	38.0440	21.8071	11.30	8.40	124.20	10.37
369	169923	1990164	37.0290	28.0202	11.40	10.80	22.20	3.69
369	258856	1996093	37.9341	26.7864	11.60	8.00	114.60	10.63
369	258868	1996093	37.9370	26.7728	9.40	7.90	99.80	8.33
373	110514	1984237	32.7231	35.2120	13.50	7.80	115.00	12.28

373	114685	1985025	31.9141	35.5372	10.50	6.00	119.60	2.55
373	153478	1989003	32.4414	35.5042	6.90	5.40	68.00	5.20
373	178251	1991060	32.7391	35.1235	6.80	4.30	101.60	1.21
373	182166	1991175	31.5499	35.4954	6.40	3.30	107.90	1.29
373	184481	1991248	31.3033	35.5916	6.80	3.90	114.10	0.85
373	185163	1991271	31.0762	35.5637	6.10	4.30	108.20	3.05
373	188059	1991363	32.0953	35.3446	7.50	3.70	90.90	2.78
373	188451	1992011	31.2387	35.3893	6.90	3.80	122.00	1.26
373	191920	1992114	31.6551	35.6974	7.00	3.90	98.40	1.33
373	194286	1992178	31.0717	35.4873	7.50	4.10	107.50	1.20
373	197173	1992251	31.2913	35.5734	6.60	3.40	113.50	1.16
373	197301	1992254	31.8977	35.1158	6.40	3.60	97.70	2.34
373	198244	1992281	30.5336	35.2601	7.40	4.50	87.60	1.72
373	198252	1992282	31.3039	35.3633	5.60	3.50	105.80	2.32
373	204379	1993085	32.1542	35.2545	8.20	3.90	102.30	5.14
373	209872	1993214	31.5067	35.4127	7.00	3.50	102.10	11.19
373	213498	1993308	31.4363	35.5525	7.10	3.70	109.30	3.16
373	243844	1995220	32.4103	35.5439	7.30	4.80	93.10	1.06
373	261219	1996131	30.3370	35.1588	5.50	3.20	84.30	2.40
373	261902	1996143	32.1348	35.5545	5.20	3.40	90.20	1.97
373	271344	1996289	30.4751	35.1029	4.80	3.00	83.60	2.32
373	271345	1996289	30.4871	35.1151	5.50	3.90	86.50	0.44
373	271605	1996292	30.4746	35.1121	6.10	3.00	89.40	2.94
373	284665	1997138	32.7709	35.3102	6.60	5.70	165.40	2.41
374	147095	1988135	33.1529	35.6321	9.20	5.80	117.60	4.16
374	184845	1991259	33.0810	35.6419	6.10	5.50	161.30	0.77
374	237649	1995116	34.1287	35.6232	8.00	7.10	147.80	4.76
374	270066	1996271	33.0126	35.6191	5.40	4.90	144.00	2.68
374	274591	1996338	33.7170	35.5102	18.80	6.00	109.10	5.65
376	238308	1995126	38.5814	-8.0591	9.00	5.80	98.60	1.15
376	261753	1996141	37.3828	-8.4908	8.30	4.40	36.60	2.98
376	264082	1996177	40.0323	-7.7564	6.80	4.60	83.90	3.91
376	265337	1996199	37.3485	-8.4695	5.00	3.90	36.90	1.78
376	268196	1996243	38.4456	-8.0536	7.80	5.70	69.40	2.84
376	281342	1997088	37.4195	-7.9668	6.90	4.80	21.10	1.41
376	282374	1997104	37.3511	-8.4061	5.60	4.20	41.50	0.87
376	285908	1997162	37.4632	-7.7071	5.60	4.60	0.30	1.73
376	285983	1997164	41.2648	-7.5093	7.70	5.90	96.80	2.50
377	150050	1988233	37.2259	-3.7421	9.00	5.10	173.20	3.05
377	174576	1990311	37.0027	-3.7082	6.10	4.60	138.70	2.07
377	204208	1993080	37.0931	-3.5188	5.90	4.80	151.40	0.55
377	215251	1993356	37.0133	-3.9507	4.70	3.50	163.40	5.24
377	215828	1994008	37.0712	-3.9011	6.10	3.80	169.00	3.50
377	235494	1995076	37.1760	-3.7733	4.50	3.60	164.70	0.91
377	246559	1995271	36.9797	-3.7368	5.10	3.90	13.80	10.85
377	253792	1996009	37.0734	-3.9062	5.30	3.70	177.90	4.30
377	275944	1996363	37.1701	-3.7085	4.40	3.20	155.20	3.52
377	278915	1997055	37.0453	-3.8148	6.00	3.70	161.80	2.38
377	281499	1997090	37.0732	-3.8966	5.60	3.50	7.90	4.55
377	282613	1997107	37.0497	-4.2163	4.80	3.70	149.40	2.20
377	282621	1997107	37.0278	-4.2210	4.90	3.60	149.00	1.00
377	285773	1997159	37.0237	-5.4003	6.40	4.60	148.40	3.09
377	295402	1997332	37.0457	-5.3539	6.00	4.50	161.30	2.71
377	295440	1997333	37.0499	-5.3611	7.10	4.30	168.80	0.45

377	300834	1998102	37.2015	-4.2152	5.60	5.10	47.30	1.47
377	300968	1998103	37.2174	-4.1963	4.80	4.30	1.10	2.96
377	301031	1998104	37.2122	-4.2181	4.60	4.30	176.90	1.75
377	301854	1998127	37.0600	-3.9361	4.90	3.20	178.60	1.46
377	309968	1999033	38.0898	-1.4854	11.40	9.70	70.30	7.87
377	309990	1999034	38.0605	-1.5106	7.40	6.60	101.50	2.71
377	310233	1999042	37.0505	-3.6745	4.80	3.50	158.90	1.83
377	313983	1999158	37.2286	-3.6852	3.30	2.90	155.40	0.38
378	157728	1989150	43.1204	-0.3272	8.90	5.00	9.90	10.04
378	169900	1990163	43.1055	-0.3203	8.30	4.50	9.30	11.92
378	181746	1991164	43.0362	-0.0412	5.40	3.00	16.80	10.13
378	190659	1992079	42.2224	2.0739	6.30	4.20	48.60	3.53
378	217344	1994044	43.0475	-0.7221	3.80	3.00	12.00	10.52
378	224302	1994229	42.9054	-0.2600	5.60	4.10	3.80	6.89
378	233864	1995043	43.0738	-0.2310	6.20	3.00	7.70	11.65
378	253540	1996006	43.1225	-0.3197	6.20	3.60	7.00	5.57
378	256017	1996049	42.8111	2.5420	5.90	4.50	47.60	2.42
378	256019	1996049	42.7938	2.5369	5.10	4.90	67.50	6.08
378	256026	1996049	42.8009	2.5519	6.60	4.10	34.90	3.29
378	256134	1996050	42.8047	2.5736	6.70	4.60	49.80	4.63
378	257550	1996074	43.0513	-0.6517	4.10	3.40	32.10	18.54
378	261646	1996138	42.7500	0.9168	4.60	2.80	0.20	7.33
378	267353	1996228	42.8003	2.5696	5.60	4.00	89.20	9.33
378	270435	1996277	43.0112	-0.2011	6.70	3.60	8.90	9.58
378	272182	1996300	42.5176	0.2057	5.10	3.30	1.90	4.56
378	274336	1996334	42.9931	-0.2746	5.20	3.60	10.90	11.41
378	278302	1997043	42.6053	2.1835	5.00	3.30	24.20	7.05
378	285632	1997156	42.6946	2.0393	4.40	3.20	29.10	9.75
378	287110	1997183	42.6635	0.6644	6.60	2.70	12.80	2.51
378	289107	1997219	42.5770	2.7704	5.50	4.00	42.20	7.59
378	308105	1998332	43.1169	-0.1856	8.00	4.10	173.50	7.23
378	314092	1999162	43.0970	-0.5287	7.20	3.90	9.20	10.14
378	317234	1999277	42.9233	0.6409	9.50	4.90	179.60	5.16
379	171407	1990208	43.8928	7.8206	5.40	3.40	147.00	5.08
379	171810	1990221	44.0332	7.4039	3.90	2.70	131.50	4.67
379	172279	1990236	43.9367	7.2629	3.70	2.40	139.50	5.07
379	203932	1993074	43.9016	7.8281	5.50	3.20	148.40	6.33
379	217502	1994048	43.7213	6.2186	6.90	4.60	113.40	1.89
379	229296	1994328	43.8170	6.4715	4.10	2.90	165.40	5.12
379	237268	1995111	43.7985	7.5678	6.80	3.40	155.80	4.97
379	237313	1995111	43.7820	6.7516	5.40	3.20	139.40	2.80
379	255669	1996043	43.7988	7.4048	4.30	2.60	146.40	4.55
379	271570	1996291	44.0020	7.5398	4.00	2.90	122.60	3.47
379	276001	1996364	44.0131	7.5839	3.30	2.30	142.30	2.10
379	278094	1997039	43.6098	5.6215	5.20	4.10	9.40	5.81
379	286747	1997177	43.9899	7.3074	3.20	2.40	152.80	1.27
379	286752	1997177	43.9799	7.3016	2.80	2.40	154.90	2.62
379	287237	1997185	43.9742	7.3085	3.30	3.00	125.00	3.41
379	287484	1997189	43.8135	7.5624	4.80	2.70	155.30	7.79
379	287602	1997191	43.9772	7.2846	3.40	2.50	132.70	2.66
379	289564	1997228	43.9197	7.7099	3.70	3.00	154.30	1.99
379	290610	1997248	43.8718	7.7647	4.60	2.70	145.60	10.22
379	296519	1997344	43.8044	7.5575	4.90	2.80	153.40	6.76
379	298935	1998040	44.0011	4.9546	7.30	3.90	48.00	5.27
379	299493	1998058	43.8680	7.7604	4.90	2.90	143.40	8.57

379	304360	1998206	43.9715	7.1103	4.00	2.60	139.20	3.04
379	308573	1998349	43.9781	7.6262	3.70	2.80	138.50	3.16
379	318221	1999305	43.7802	7.3745	4.60	3.10	143.70	5.11
380	215030	1993350	44.0239	9.8479	9.00	5.30	23.30	3.45
380	264816	1996190	43.7222	8.1237	4.90	4.50	131.10	1.00
381	107654	1984120	43.1399	12.4570	11.90	4.20	46.60	7.94
381	164123	1989356	42.9991	12.6856	6.10	5.20	60.00	8.81
381	176874	1991014	43.8134	11.9376	7.00	4.10	48.50	5.20
381	201878	1993017	43.5936	12.1987	8.20	4.40	18.90	5.50
381	207428	1993155	43.1237	12.6895	8.90	3.90	75.00	1.84
381	207463	1993156	43.1054	12.6597	13.60	6.70	77.20	1.84
381	239957	1995150	43.3963	12.7931	6.40	4.80	62.30	14.37
381	291669	1997269	43.0416	12.8212	9.40	5.20	83.50	8.00
381	291738	1997269	42.9909	12.8960	9.40	4.40	73.40	2.11
381	292169	1997275	43.6242	12.1596	7.50	4.60	33.40	3.65
381	292173	1997275	43.6048	12.1193	7.70	5.30	27.50	1.99
381	292199	1997276	43.0207	12.7828	10.10	5.40	79.20	6.18
381	292359	1997278	43.6300	12.1208	5.80	4.70	34.40	4.64
381	292738	1997285	42.8740	12.9096	11.30	5.00	78.80	2.95
381	292837	1997287	42.9018	12.8609	10.70	4.80	74.50	3.33
381	292939	1997288	43.0106	12.8532	11.50	5.90	85.30	3.41
381	293482	1997298	42.7995	13.0388	9.50	6.00	69.70	1.74
381	294243	1997312	42.8568	13.0836	9.90	4.50	71.70	12.64
381	294312	1997313	42.8601	13.0770	9.70	3.50	71.60	11.87
381	294369	1997314	43.0465	12.8639	8.10	5.00	67.50	5.91
381	294765	1997321	43.1135	12.8397	5.80	4.70	94.20	3.54
381	295352	1997331	42.9417	12.8881	6.40	3.30	62.10	1.16
381	297639	1997365	42.8271	13.0231	7.60	4.40	62.60	6.26
381	298847	1998038	42.9704	12.7807	13.80	6.80	68.10	4.20
381	300556	1998093	43.1826	12.7983	12.70	7.20	86.50	8.95
383	122345	1985325	42.2957	19.9587	3.90	3.40	67.60	2.26
383	122388	1985326	42.3180	19.9552	3.70	3.40	68.10	4.50
383	122415	1985327	42.3019	19.9686	4.00	3.50	108.80	4.39
383	122416	1985327	42.3133	19.9468	3.80	3.50	101.90	3.58
383	122439	1985327	42.3062	19.9538	4.00	3.60	46.40	4.87
383	122475	1985328	42.3286	18.8551	4.30	3.90	75.70	3.96
383	122476	1985328	42.3260	18.9058	4.50	4.20	37.00	4.01
383	122481	1985328	42.3172	18.8667	4.30	4.10	43.60	1.86
383	122486	1985328	42.3138	18.8932	4.70	4.30	175.20	1.15
383	122519	1985329	42.3576	18.8852	4.20	4.10	74.20	4.92
383	122918	1985342	42.3045	19.9999	4.40	3.40	86.70	4.85
383	123272	1985355	42.3008	20.0124	3.90	3.40	55.80	2.86
383	123297	1985355	42.3039	20.0202	3.90	3.60	47.60	4.61
383	123522	1985361	42.3143	19.9742	3.70	3.40	92.40	2.33
383	123888	1986010	42.3004	19.9717	4.20	3.20	74.80	2.59
383	127043	1986124	42.3281	19.9834	3.70	3.30	64.00	4.96
383	156119	1989098	42.8368	18.7898	5.30	4.70	5.50	4.41
383	165222	1990031	41.3845	22.7174	5.50	4.40	162.90	2.90
383	168229	1990114	42.1117	19.2417	4.70	3.40	61.60	8.77
383	172617	1990246	45.9042	15.8953	9.00	6.40	168.40	2.38
383	191075	1992090	41.1291	21.0402	5.10	3.70	13.60	7.91
383	196768	1992239	42.3805	19.4042	4.40	3.70	41.00	0.65
383	199029	1992304	42.4224	19.1253	4.70	3.80	36.20	2.53
383	210363	1993225	42.8347	18.7294	5.90	4.90	175.90	5.12

383	217340	1994044	42.8347	19.1753	5.30	4.40	164.80	5.91
385	139078	1987192	36.6820	-5.8746	3.80	3.30	72.20	5.96
385	140294	1987242	36.8380	-5.5762	8.80	6.30	36.30	7.18
385	158242	1989167	36.8924	-5.2585	6.20	4.20	161.50	2.07
385	158258	1989167	36.8628	-5.2198	6.70	4.30	156.00	0.89
385	171119	1990199	36.6921	-6.1981	7.20	5.10	26.80	10.42
385	193779	1992165	36.5977	-5.6580	7.70	5.40	83.70	8.61
385	218025	1994064	36.9671	-4.3624	5.90	3.80	146.80	2.96
385	218908	1994088	36.7067	-3.3316	9.20	6.00	165.10	5.09
385	221941	1994166	35.1677	-3.9196	7.00	5.50	12.20	3.68
385	225085	1994249	36.8107	-5.3631	5.20	3.30	131.90	1.87
385	228340	1994312	36.9462	-2.3441	8.40	5.90	153.80	2.60
385	250224	1995322	36.9226	-2.5298	8.30	4.40	171.70	4.11
385	262897	1996161	35.0575	-4.0086	7.70	6.80	93.00	1.88
385	275782	1996360	36.6924	-5.3605	6.00	4.60	123.40	0.99
385	286418	1997172	36.5969	-5.5078	5.40	4.20	141.90	4.05
385	291648	1997268	36.4300	-5.3140	5.90	5.00	137.20	0.21
385	299399	1998055	36.8644	-4.5506	7.00	3.90	163.10	3.84
385	299494	1998058	36.7763	-5.7571	5.40	4.10	10.60	4.70
385	300935	1998103	36.9993	-4.5120	6.00	4.20	155.90	0.82
385	301242	1998109	37.0217	-2.3593	8.10	4.70	173.10	3.23
385	307858	1998322	36.9608	-3.7847	7.30	4.60	162.40	3.03
390	83139	1981015	40.7176	15.2952	11.50	7.20	73.50	11.79
390	83173	1981017	40.6976	15.3075	11.80	7.10	68.40	5.14
390	83249	1981020	40.6543	15.3976	10.80	6.80	56.80	4.76
390	83666	1981045	40.9837	14.5479	8.40	8.10	50.70	5.72
390	84674	1981087	40.6666	15.5169	9.00	6.10	46.30	6.01
390	108010	1984132	41.7251	13.9045	10.40	4.70	36.10	3.23
390	108018	1984132	41.7138	13.8653	11.60	4.60	29.40	5.73
390	108031	1984132	41.6847	13.8915	9.20	4.00	29.40	0.99
390	108042	1984132	41.6827	13.8566	9.80	4.70	28.60	1.84
390	108059	1984132	41.6615	13.9005	9.70	4.30	36.80	6.32
390	108061	1984133	41.7177	13.8870	10.30	4.70	23.10	5.16
390	108073	1984133	41.6344	13.8439	8.30	4.30	30.30	5.66
390	108147	1984135	41.7508	13.8328	10.00	4.80	27.50	1.87
390	108972	1984171	41.7058	13.8934	9.80	4.00	32.90	5.20
390	109112	1984176	41.7792	13.8430	8.10	4.60	36.60	6.18
390	109281	1984183	41.6715	13.9136	9.80	5.40	33.40	7.73
390	115888	1985073	41.6115	14.3006	6.80	4.10	16.80	0.67
390	143559	1988008	40.0169	15.9765	6.10	5.00	48.80	1.67
390	233287	1995032	40.8657	15.3926	9.50	6.30	44.90	9.61
390	240782	1995164	40.7008	15.3701	9.60	6.20	44.70	0.89
390	243861	1995220	39.7148	16.5439	6.50	5.90	138.30	1.53
390	280679	1997078	41.4221	14.6352	12.10	6.90	22.30	1.73
390	287459	1997189	39.2391	16.3984	15.40	6.30	106.90	7.21
390	299116	1998046	41.7849	15.9318	15.80	10.10	22.90	6.58
390	306151	1998266	40.0066	16.0101	12.00	9.80	68.90	15.23
391	67376	1978230	41.8023	20.3798	7.10	6.10	87.20	5.90
391	74764	1979294	41.1353	20.1082	6.40	4.80	83.30	9.31
391	75030	1979312	41.1131	19.7937	7.90	5.20	91.60	7.79
391	80027	1980201	41.4544	20.4316	7.20	5.50	138.60	6.70
391	104767	1983359	41.8981	19.1655	7.60	4.40	50.30	2.63
391	114479	1985016	40.6808	19.1831	6.00	5.50	50.20	7.10
391	123996	1986013	41.2523	19.6435	6.20	3.20	69.90	2.89

391	125226	1986062	41.9321	20.3210	4.90	3.20	62.40	4.96
391	128141	1986158	41.2491	19.7462	7.20	3.90	77.50	7.00
391	128672	1986177	41.2215	19.7551	6.50	3.80	66.80	5.34
391	135101	1987044	40.1988	20.0241	6.20	4.00	74.00	7.63
391	143572	1988009	41.2105	19.8181	6.80	3.30	73.10	5.13
391	143582	1988009	41.2254	19.7984	5.80	3.00	73.80	4.47
391	145778	1988086	40.1328	20.0196	6.30	4.40	74.00	6.73
391	151373	1988288	40.1916	19.9027	8.20	6.20	58.00	13.16
391	155476	1989076	41.2092	20.0433	5.30	3.40	73.10	9.83
391	159600	1989195	41.9264	20.1366	4.30	3.30	49.60	4.53
391	161554	1989267	41.2741	19.5837	5.90	3.40	77.80	3.43
391	168289	1990116	40.9707	19.8493	6.70	3.30	72.60	3.34
391	168981	1990134	40.6366	19.9508	5.40	5.00	115.80	9.86
391	178730	1991075	41.4474	19.5503	5.70	3.20	60.70	1.37
391	192393	1992129	40.0565	19.8249	6.00	4.80	75.70	3.61
391	215312	1993358	40.1656	19.8325	6.30	5.70	67.00	6.50
391	221216	1994150	40.0814	19.7522	5.40	4.60	53.30	1.73
391	276673	1997012	40.7319	19.8737	6.20	5.20	63.40	10.54
392	86348	1981183	39.4386	20.7197	8.20	7.00	39.10	14.48
392	86380	1981184	39.4395	20.7609	11.10	8.70	83.60	10.52
392	93514	1982216	39.6787	20.6817	9.70	5.80	24.90	11.09
392	97917	1983067	39.7250	20.3337	9.30	5.20	29.10	6.76
392	100756	1983183	40.8395	20.8043	5.80	4.70	113.00	1.81
392	100757	1983183	40.8016	20.7976	6.00	5.20	95.90	4.53
392	104834	1983362	40.8391	20.8696	4.70	3.70	85.50	1.81
392	108368	1984145	39.9854	20.2516	7.10	6.20	64.80	10.69
392	109544	1984194	40.8642	20.5003	4.70	4.20	52.50	6.20
392	112898	1984323	39.6712	20.6582	8.60	5.10	37.30	8.96
392	116695	1985106	39.7273	20.7248	8.80	5.30	25.60	10.91
392	116696	1985106	39.7536	20.7649	8.40	6.10	51.20	8.19
392	121669	1985300	39.9815	20.7880	7.00	4.90	17.50	1.71
392	134209	1987007	40.4076	20.6803	5.30	4.30	115.20	2.06
392	160101	1989214	40.7678	20.2404	4.50	3.80	82.80	9.72
392	196223	1992226	40.9730	21.0386	4.70	4.10	52.30	8.67
392	229984	1994343	40.8619	20.8401	4.00	3.70	93.20	4.06
392	238445	1995129	40.7617	20.8678	4.90	3.70	131.90	3.47
392	265950	1996208	40.0513	20.6832	5.80	5.00	25.10	3.36
392	266594	1996218	40.0452	20.6973	4.90	4.30	45.20	5.24
392	267025	1996224	40.0186	20.7705	6.20	5.40	96.60	4.97
392	267630	1996233	40.0073	20.7224	5.90	4.50	162.10	5.74
392	269991	1996270	40.0406	20.8170	5.50	4.20	10.70	6.78
392	274585	1996338	39.9328	20.2453	7.30	4.90	60.60	15.09
392	295249	1997329	40.2696	20.2723	6.80	5.80	49.60	13.60
395	224692	1994239	34.9639	-3.7108	8.10	5.70	160.80	1.62
395	225207	1994251	34.8334	-5.4348	11.40	4.80	72.50	7.39
395	233184	1995030	34.8845	-4.0072	7.60	4.90	167.20	1.34
395	235716	1995081	34.8977	-4.0644	9.00	6.00	164.00	1.28
395	258894	1996094	34.1731	-4.8187	12.30	6.00	113.70	4.03
398	147725	1988157	38.4269	14.6702	8.60	5.70	160.30	2.35
398	160933	1989245	37.8696	14.7227	7.00	4.30	159.40	2.97
398	178911	1991080	37.6513	13.8933	6.60	5.50	17.80	2.60
398	184948	1991263	37.5703	14.8791	7.90	5.80	147.60	1.29
398	185961	1991296	37.7728	14.9767	8.10	6.80	112.30	7.11
398	191331	1992097	37.8199	14.6068	9.70	5.50	160.90	4.12

398	197897	1992271	37.8267	14.6914	8.00	5.70	165.20	4.12
398	197899	1992271	37.7837	14.6415	9.40	6.00	168.10	3.09
398	197918	1992271	37.7924	14.7035	9.20	5.80	165.20	1.23
398	212655	1993285	37.8146	14.9016	11.30	4.80	164.60	0.67
398	244967	1995239	38.2569	15.2071	10.10	5.00	142.80	2.85
398	246987	1995276	38.0967	14.1176	6.90	5.10	5.40	1.44
398	265106	1996196	37.8071	14.9240	7.80	4.70	163.80	0.44
398	267284	1996227	37.7824	14.9539	10.70	6.00	154.30	3.81
398	267313	1996228	37.7754	14.9187	8.20	5.40	157.20	1.64
398	275148	1996349	37.8523	13.8983	8.70	4.70	179.00	4.45
533	146543	1988114	55.0145	-2.8570	7.80	5.40	46.30	4.82
533	166332	1990063	52.9952	-2.2254	8.60	6.20	134.30	5.19
533	195715	1992211	53.1419	-4.3988	5.80	5.00	138.20	4.04
533	196360	1992230	51.6630	-3.2574	7.60	5.40	80.10	7.82
533	217214	1994041	53.2213	-4.1047	9.20	5.30	69.00	4.11
533	218490	1994076	52.5499	-3.4182	6.80	5.20	165.50	10.47
533	224282	1994229	57.1986	-5.6805	9.10	6.70	179.50	0.33
533	234368	1995053	52.9707	-2.2886	6.80	4.20	141.60	2.14
533	260956	1996127	53.0172	-2.2071	6.80	4.90	146.00	5.16
533	269537	1996264	52.3395	-3.2883	9.20	6.60	14.10	7.48
533	278219	1997041	53.1916	-1.5259	10.20	6.30	66.10	7.13
533	307247	1998303	51.8204	-4.5194	9.80	7.00	38.20	1.39
535	143218	1987360	59.8204	6.4651	8.80	5.30	70.00	0.23
535	151546	1988294	59.9366	6.2875	12.90	6.80	69.90	5.45
535	157781	1989152	60.7074	5.5656	8.40	4.70	86.70	1.40
535	157998	1989158	60.7048	5.5836	8.20	4.60	87.90	5.20
535	161240	1989257	60.7166	5.5637	8.40	4.70	86.70	3.59
535	185356	1991277	60.5162	4.6889	7.60	4.60	76.60	1.28
535	248007	1995287	60.2733	5.2603	12.20	7.90	85.80	10.88
538	113972	1984364	48.0939	6.5751	7.40	5.50	157.20	3.73
538	153570	1989006	43.0222	0.1625	11.70	3.70	8.40	1.28
538	163819	1989347	44.8040	6.8207	3.90	2.50	89.50	2.99
538	177741	1991042	44.8604	6.7671	4.20	2.70	88.00	2.49
538	177792	1991044	44.8749	6.8044	3.80	2.50	82.00	1.49
538	177796	1991044	44.8724	6.7935	3.60	2.50	87.70	1.94
538	199116	1992306	44.6412	6.8173	3.20	2.40	96.60	1.40
538	214516	1993337	44.7432	6.7810	3.80	2.40	82.50	0.85
538	247542	1995281	44.5177	6.9063	2.70	2.50	56.80	2.07
538	247990	1995286	44.4974	6.8812	3.20	2.50	93.40	0.78
538	248147	1995289	44.7961	6.8325	4.20	2.80	79.80	2.73
538	256038	1996049	44.7573	6.7997	4.60	2.70	85.10	4.81
538	259796	1996109	44.2522	6.8985	2.80	2.20	88.00	1.01
538	263074	1996163	44.6477	6.7646	3.30	2.30	87.00	1.05
538	270782	1996283	45.9501	6.8759	4.70	2.90	94.00	3.99
538	275048	1996347	43.0302	0.1304	6.10	2.70	5.30	6.26
538	277873	1997035	42.9684	0.2261	5.00	2.40	12.50	7.92
538	278785	1997052	44.8307	6.7162	3.10	2.40	76.30	2.01
538	278786	1997052	44.8284	6.7097	3.10	2.40	75.40	1.36
538	284428	1997135	45.2072	6.6962	3.50	2.40	86.90	2.95
538	290271	1997242	44.7305	6.7020	3.50	2.60	76.60	1.73
538	291048	1997256	44.7552	6.8029	3.10	2.40	80.70	0.63
538	300378	1998087	48.0338	6.5151	4.40	3.80	175.80	6.01
538	310009	1999034	45.0423	5.7431	4.60	3.30	26.00	3.00

541	151464	1988291	50.7954	5.8980	8.00	6.20	2.60	8.49
541	165427	1990038	50.4346	6.0005	8.40	6.50	61.20	2.26
541	166100	1990055	50.4499	6.0223	8.40	6.20	125.60	4.23
541	183585	1991222	50.7008	5.6818	8.50	6.00	173.50	4.97
541	249254	1995303	50.5114	5.9024	8.40	5.00	11.10	4.25
541	265797	1996205	50.4709	5.8824	7.60	4.20	0.50	6.12
543	44397	1974132	48.2931	9.0322	9.70	3.60	106.70	6.13
543	63962	1978016	48.2828	8.9987	5.30	4.00	82.60	3.21
543	103956	1983322	50.5497	7.2563	7.90	4.60	35.90	10.74
543	134729	1987029	47.4342	9.2878	5.90	4.80	47.20	4.98
543	141681	1987301	47.1044	9.1663	6.00	5.00	72.40	5.40
543	141751	1987305	47.2360	9.6126	7.10	5.70	20.50	8.94
543	142108	1987321	47.1357	9.3424	6.10	4.50	73.30	3.37
543	155388	1989072	50.6884	9.9910	9.30	7.20	176.10	7.31
543	155971	1989092	47.1262	9.0867	5.10	3.90	84.70	9.38
543	161782	1989277	49.1518	8.4871	7.80	4.70	110.80	12.07
543	169438	1990149	50.1192	8.5854	10.60	5.80	82.50	3.00
543	191588	1992105	50.9345	6.1556	6.70	5.10	145.50	10.56
543	232749	1995022	48.1409	8.6422	6.30	5.80	10.80	1.98
543	234574	1995056	48.1123	8.5563	6.00	5.40	84.40	1.85
543	257106	1996066	50.6933	6.2423	5.70	4.30	7.00	7.75
543	262261	1996150	49.9611	7.4147	5.60	4.40	30.30	5.38
543	293283	1997294	48.7872	9.7063	5.20	3.40	154.10	4.95
543	294816	1997322	47.1089	9.1338	4.40	4.10	17.10	2.35
543	295465	1997333	50.2836	8.3095	5.60	4.70	21.30	9.60
543	295485	1997333	50.2597	8.2811	5.80	4.70	24.70	5.56
543	300210	1998082	47.1360	9.1070	5.40	4.30	10.90	3.68
543	304406	1998208	48.3345	8.9985	4.20	3.70	115.80	3.15
543	316596	1999255	48.6022	8.2327	4.40	3.40	136.40	6.15
543	317453	1999287	47.3183	9.9796	4.70	3.40	4.90	1.92
543	318085	1999301	47.3370	9.9444	4.90	3.50	1.50	3.70
544	79914	1980197	47.6606	7.4387	7.80	5.50	43.90	4.54
544	110838	1984249	47.3147	8.5415	9.80	5.30	59.50	8.54
544	125146	1986058	47.6993	8.9092	7.00	4.90	68.20	5.50
544	161692	1989273	46.3408	7.3260	5.50	3.90	84.90	3.04
544	186764	1991324	46.7167	9.5143	6.90	6.10	173.90	5.40
544	189639	1992048	46.7163	9.5693	5.00	4.30	164.10	8.93
544	190983	1992088	46.7400	9.5299	5.20	4.70	30.00	6.83
544	201211	1992365	47.7575	8.2898	6.50	5.60	47.40	5.79
544	224701	1994240	46.8991	8.7188	4.90	4.30	40.60	3.50
544	241473	1995176	47.6358	8.7808	4.80	4.20	48.40	5.57
544	264214	1996180	47.7646	8.7135	4.00	3.20	176.90	11.17
544	267249	1996227	46.3284	7.5038	4.10	3.10	89.50	1.11
544	267852	1996236	46.7792	9.7722	4.40	4.10	148.90	5.64
544	267932	1996237	47.9573	7.4993	3.40	2.80	160.00	14.75
544	269233	1996258	46.0596	6.8238	4.40	2.80	96.50	2.64
544	275802	1996360	46.1934	7.2175	3.80	3.00	98.30	4.72
544	277718	1997032	47.6729	7.4445	3.50	3.00	126.90	9.81
544	283315	1997117	46.1645	7.6906	3.80	2.90	99.50	2.24
544	288814	1997213	46.5537	7.2564	4.40	3.40	98.30	3.98
544	295342	1997331	46.1445	6.9298	4.90	3.20	111.60	5.85
544	300451	1998089	46.6095	7.3006	4.80	3.00	97.00	5.72
544	301849	1998127	46.0911	7.3792	4.80	3.40	105.60	3.71
544	308425	1998343	46.1484	7.5482	5.00	3.60	103.10	4.32
544	313182	1999134	46.7682	7.9663	4.80	3.60	102.20	3.74

544	319832	1999363	46.1157	6.9189	4.80	3.60	86.40	6.86
545	76022	1980005	44.9223	7.2551	10.80	10.20	143.80	15.97
545	101229	1983202	45.8523	11.3300	8.80	4.30	165.90	1.66
545	130544	1986241	46.3260	12.4952	5.20	3.80	8.20	0.99
545	137895	1987144	45.6996	10.6853	7.80	4.50	152.70	5.42
545	144453	1988039	44.1721	10.4809	8.30	6.50	44.60	2.98
545	144457	1988039	44.1895	10.5248	6.20	5.90	86.30	2.26
545	196342	1992229	44.4916	7.2409	3.50	2.50	84.70	2.57
545	203962	1993074	44.3805	7.3144	3.30	2.70	87.80	3.08
545	207827	1993165	45.9536	8.2085	7.00	4.50	108.10	3.85
545	209225	1993198	44.2577	8.2102	5.20	3.20	148.60	7.26
545	209235	1993198	44.2467	8.2253	5.60	3.40	128.70	7.53
545	209279	1993198	44.2388	8.2396	5.80	4.00	162.10	7.93
545	216372	1994020	44.5602	7.3267	4.10	2.90	89.90	2.12
545	216374	1994020	44.5673	7.3273	3.70	2.80	81.50	2.36
545	244795	1995236	44.0707	10.6935	10.50	4.00	19.00	4.67
545	250377	1995325	45.0445	7.5439	4.90	3.30	113.20	1.84
545	258702	1996091	45.9014	7.4849	4.90	3.30	113.50	5.98
545	264986	1996193	44.1200	9.9729	7.70	3.40	14.80	0.30
545	274066	1996329	44.0586	7.6692	3.20	2.50	149.30	3.54
545	274156	1996330	44.1425	8.5693	5.40	2.80	163.70	1.94
545	282290	1997102	46.5560	10.4717	5.00	3.90	159.20	0.61
545	287555	1997190	44.1211	10.6262	8.10	4.50	25.40	6.62
545	297279	1997358	44.1103	10.4758	8.30	5.00	24.10	2.50
545	297387	1997360	44.0866	10.4274	7.80	4.00	25.60	4.01
545	309706	1999025	44.0008	11.9705	13.70	12.00	21.70	6.21
546	71345	1979108	46.3077	13.3192	7.90	6.90	175.10	5.50
546	97421	1983041	46.2714	13.3768	4.80	4.40	7.70	2.65
546	106171	1984057	47.2818	11.5629	6.20	4.50	38.30	7.98
546	131511	1986279	46.3551	13.0171	3.70	3.20	17.20	2.43
546	144253	1988032	46.3205	13.0945	6.00	3.10	2.20	1.76
546	144343	1988035	46.3166	13.1396	5.90	3.00	11.00	2.43
546	159717	1989199	47.5213	13.0680	8.20	6.60	64.40	5.90
546	172166	1990232	47.1060	11.3573	6.70	4.60	170.30	7.21
546	205740	1993122	47.3770	11.7716	8.80	5.20	0.60	4.87
546	214485	1993336	47.2843	10.6624	6.60	4.20	0.90	3.82
546	265283	1996199	47.1454	11.5238	5.20	3.90	8.40	7.32
546	265284	1996199	47.1696	11.5376	5.00	3.60	4.20	8.55
546	270440	1996277	47.3407	11.8879	5.60	4.40	19.70	2.81
546	287709	1997193	47.1434	11.3656	5.60	3.30	4.30	3.39
546	293170	1997292	47.3246	11.8223	5.60	4.40	46.10	8.48
546	296386	1997343	46.3885	13.2569	5.80	3.50	25.90	6.66
546	301123	1998105	46.2695	13.7495	6.70	4.20	31.60	6.04
546	301128	1998105	46.2889	13.6849	7.60	4.40	23.40	5.90
546	301813	1998126	46.2695	13.7296	5.70	3.90	34.50	2.95
546	302013	1998131	46.2887	13.8062	6.60	4.40	48.10	8.40
546	306046	1998263	47.2878	11.2989	7.70	4.00	6.60	4.69
546	308003	1998328	46.2495	13.7002	6.20	3.50	30.70	6.84
546	311780	1999090	47.8651	14.2507	6.70	3.50	64.00	6.20
546	313141	1999133	46.2628	13.6257	5.80	3.10	22.70	11.72
547	227749	1994300	49.7784	18.4544	11.10	5.40	2.60	4.88
547	227952	1994304	49.7999	18.4517	12.90	5.40	2.80	4.12
547	278544	1997047	49.7823	18.4601	10.70	5.30	176.20	4.83

553	253462	1996004	28.6837	34.8160	28.10	9.20	83.40	16.95
553	254026	1996013	29.0582	34.8993	11.60	8.90	114.70	6.64
553	264570	1996185	29.2238	34.8422	8.20	4.70	103.00	5.84
553	271862	1996295	28.8651	34.8952	9.20	4.60	98.40	1.29
555	234130	1995048	29.7092	35.0043	7.00	3.50	81.60	0.78
555	252599	1995357	29.2830	34.8940	17.70	11.90	35.80	48.06
555	254536	1996022	29.2818	34.7679	14.40	8.30	105.00	40.32
555	254548	1996023	29.1784	34.7906	14.50	8.60	104.50	35.86
555	255057	1996033	28.9009	35.0947	15.60	9.40	106.60	48.65
555	290254	1997242	28.9809	35.0762	10.00	7.20	105.30	5.14
715	123075	1985349	38.8123	69.8728	7.10	4.20	162.80	3.62
715	154012	1989022	38.4808	68.6061	11.00	9.10	133.60	8.20
717	119758	1985227	38.9253	70.4512	11.80	6.50	134.80	12.54
717	135348	1987054	39.0250	70.5711	10.30	5.30	146.90	11.85
717	139227	1987198	39.0142	70.5420	14.50	7.00	145.50	16.67
717	142007	1987316	38.9897	70.3377	12.80	5.80	139.50	11.87

TABLE 3: LOCATION RESULTS, P ONLY

LOCAL NETWORK RELOCATIONS (P ONLY) FOR 594 EHBGT5 EVENTS,
SORTED BY GEOGRAPHIC REGION NUMBER (GRN)

GRN	EVID	JDATE	LAT	LON	ERROR_ELLIPSE			DISTANCE TO EHB KM
					SMAJ KM	SMIN KM	STRIKE DEG	
337	83824	1981054	41.6365	45.9124	11.20	8.70	171.50	22.81
337	96413	1983002	41.6824	46.0761	13.30	9.30	143.70	5.60
337	163946	1989351	41.7623	46.1455	12.40	8.80	161.60	9.14
357	92939	1982182	48.3141	22.2718	15.10	8.80	28.90	14.51
358	97646	1983052	45.3148	26.8391	9.40	5.70	121.90	5.84
358	126813	1986117	45.5000	26.9751	9.30	7.40	91.00	5.58
358	148811	1988202	45.2977	24.9835	9.20	6.90	21.30	7.66
358	173897	1990287	45.9518	26.9856	12.30	8.70	112.30	7.86
358	184249	1991244	45.5023	26.9578	10.10	7.80	116.40	3.89
358	184253	1991244	45.5594	26.9671	13.50	10.00	60.40	1.63
358	195028	1992194	45.6808	27.1292	10.90	9.30	88.10	3.75
358	205957	1993127	45.4237	25.4158	14.00	7.60	160.20	16.42
358	244556	1995232	45.0840	27.5235	14.60	9.80	32.60	31.30
358	250797	1995332	45.3275	24.2114	11.20	8.30	21.70	11.73
358	263155	1996163	45.5843	27.4340	9.60	8.50	56.30	8.39
359	116415	1985094	42.1520	25.8015	12.30	8.80	149.40	12.94
359	135332	1987053	42.2785	24.8605	11.30	9.40	161.90	16.24
359	136409	1987088	42.1968	25.3430	11.20	9.10	171.20	13.43
359	136754	1987102	42.5459	26.6048	17.60	12.50	12.60	7.02
359	137363	1987127	42.4940	26.5709	14.10	10.00	19.70	3.78
359	146248	1988103	42.4281	23.0743	20.90	8.90	111.20	13.51
359	153160	1988358	42.1544	25.1733	12.50	8.40	127.40	4.24
359	157169	1989130	43.2086	25.4136	28.50	12.80	176.10	17.17
359	162483	1989299	42.4837	26.2792	14.90	8.70	7.10	10.58
359	163643	1989340	42.1152	24.8407	10.10	8.20	4.20	13.22
359	184612	1991252	42.2539	25.5277	17.30	11.70	82.90	3.18
359	184685	1991254	42.2960	25.4762	10.80	10.00	172.70	8.74
359	184788	1991258	42.2808	25.4233	11.50	10.50	55.60	6.94
359	252065	1995348	42.6252	23.3842	9.50	7.20	28.00	4.31
359	255046	1996033	42.7252	23.9708	13.70	9.30	10.90	4.15
359	259968	1996111	42.7812	23.5720	17.60	7.60	170.00	19.17
359	273770	1996324	42.1709	25.6605	9.90	9.70	111.80	10.50
359	290243	1997241	42.3360	23.3868	11.00	8.80	101.90	2.55
362	100393	1983167	41.6888	44.8237	16.90	10.60	105.50	2.98
362	103607	1983306	41.8993	44.3026	10.30	8.10	10.60	2.30
363	102198	1983240	41.7543	23.7465	12.50	7.50	139.90	11.21
363	103149	1983285	41.1977	23.1697	7.60	6.60	175.80	5.14
363	110259	1984226	41.6851	23.7172	12.80	7.70	146.10	2.77
363	137223	1987122	41.9384	24.5959	11.20	7.40	145.80	7.02
363	140993	1987273	41.7432	23.7256	14.40	8.40	137.50	3.70
363	153210	1988359	41.2254	23.2580	7.10	5.90	139.00	1.22

363	155394	1989072	41.1190	23.9212	8.30	6.30	134.00	2.99
363	160185	1989217	41.1876	23.1287	7.20	6.80	142.30	10.60
363	160541	1989230	41.1962	23.1191	7.10	6.30	144.20	1.43
363	166911	1990081	41.9438	23.0556	10.00	7.30	131.60	3.93
363	173109	1990261	41.9390	23.1206	9.60	7.30	140.10	3.61
363	176948	1991016	41.3258	23.2654	8.30	6.00	139.40	6.84
363	182130	1991174	41.2940	23.4133	7.80	6.10	123.70	2.57
363	182474	1991184	41.9455	23.3344	9.60	7.70	150.90	3.59
363	186024	1991298	41.2775	23.3364	7.00	5.80	138.70	4.78
363	204442	1993086	41.1999	23.1558	6.90	6.20	149.00	11.26
363	229385	1994330	41.7858	25.2375	8.50	7.00	15.10	7.06
363	232454	1995018	41.6844	24.0323	9.40	6.70	156.80	4.58
363	244332	1995229	41.9836	23.2676	9.30	6.90	145.90	3.91
363	278545	1997047	41.1178	23.8723	8.10	6.10	127.10	2.62
363	280577	1997077	41.6720	23.7972	9.10	6.30	144.70	3.34
363	281733	1997094	41.6479	23.8404	10.00	5.80	144.90	6.46
363	284284	1997133	41.2260	23.6518	8.60	6.20	117.20	4.56
363	284342	1997133	41.2174	23.6671	8.20	5.80	123.10	1.62
363	287963	1997198	41.7413	23.6862	10.90	7.20	143.50	7.72
364	101849	1983224	38.1341	23.1580	9.60	7.30	13.50	8.70
364	102636	1983262	38.7049	22.4098	8.90	6.80	48.10	5.94
364	105758	1984040	40.5145	21.6256	8.20	6.10	25.30	6.82
364	106017	1984050	40.6112	23.3858	9.20	6.50	77.10	6.01
364	112280	1984299	40.0720	21.6096	7.00	6.00	29.50	6.10
364	119351	1985211	40.3743	22.7348	8.90	6.80	152.00	7.53
364	151532	1988294	40.5064	22.9642	7.30	7.00	131.10	2.44
364	176010	1990355	40.9108	22.4010	7.10	6.00	173.60	8.84
364	233913	1995044	40.7039	22.7490	7.10	5.90	164.60	1.78
364	238058	1995123	40.5734	23.6599	7.60	6.80	63.70	2.54
364	238059	1995123	40.5791	23.6458	7.50	6.90	64.30	0.68
364	238076	1995124	40.5716	23.6378	7.90	6.80	59.40	4.99
364	238666	1995133	40.1709	21.6626	8.80	6.90	163.40	5.59
364	238836	1995134	40.0931	21.5470	8.20	6.20	167.10	4.14
364	238889	1995135	40.0500	21.6561	8.10	6.80	171.20	5.33
364	239060	1995136	40.0699	21.6602	7.70	6.30	168.90	9.17
364	239084	1995137	40.0524	21.6525	7.80	6.20	160.70	7.12
364	239088	1995137	40.0520	21.6291	7.60	6.40	159.90	3.55
364	239263	1995139	40.0551	21.6370	7.70	6.80	171.40	2.66
364	240360	1995157	40.1361	21.6395	8.60	6.40	159.60	3.39
364	242630	1995198	40.0927	21.5896	7.90	6.90	147.10	8.75
364	242663	1995199	40.0889	21.6057	8.20	7.10	138.50	8.44
364	242744	1995200	40.0906	21.6419	9.30	7.70	164.80	5.45
364	293287	1997294	38.9942	22.0418	9.80	8.40	166.10	6.09
364	316457	1999250	38.0779	23.5231	16.30	12.60	100.80	9.44
365	96941	1983021	39.2431	23.0079	7.70	5.80	74.50	4.49
365	105975	1984048	39.1783	23.3905	8.70	6.20	71.70	8.60
365	149747	1988224	39.9284	23.9477	14.60	11.60	131.40	2.50
365	149807	1988226	39.9366	23.9417	13.90	10.50	136.40	5.77
365	149941	1988229	39.9306	23.9377	14.00	10.80	134.80	6.30
365	155538	1989077	39.2289	23.5885	13.10	9.60	98.80	8.58
365	155545	1989078	39.2230	23.5869	12.10	7.80	89.80	3.07
365	155636	1989079	39.2401	23.5709	12.80	8.00	85.20	0.64
365	155649	1989079	39.2377	23.6948	13.50	8.80	76.70	11.49
365	156400	1989108	39.2418	23.6092	11.30	7.80	92.00	6.33
365	156824	1989120	39.2426	23.5732	12.60	7.90	88.20	5.50

365	156915	1989122	39.2442	23.5285	15.40	8.10	82.20	5.15
365	160614	1989232	39.9428	23.9719	13.50	12.10	95.70	1.99
365	165180	1990029	39.9335	23.8920	12.20	8.80	116.40	4.87
365	165230	1990031	39.1137	26.0218	13.90	11.20	59.10	3.82
365	167186	1990090	39.9406	23.9452	10.60	8.30	126.70	8.23
365	167187	1990090	39.9345	23.7974	15.80	10.20	118.40	2.43
365	167226	1990091	39.9369	23.9519	12.30	8.70	115.90	4.99
365	172606	1990246	39.9380	23.9683	12.60	9.50	141.40	4.64
365	182674	1991191	39.8833	23.3359	9.00	7.80	163.30	4.22
365	203202	1993055	40.1402	24.0398	11.30	10.20	136.00	1.66
365	219326	1994100	39.9862	23.6486	10.00	8.80	63.20	3.84
365	254923	1996030	38.4907	26.7078	15.80	10.10	69.50	20.58
365	267566	1996232	39.3929	25.9152	13.30	11.30	69.30	7.50
365	280759	1997080	39.2812	23.8020	8.10	7.40	123.20	4.23
365	293619	1997301	39.8034	23.8031	9.60	8.30	103.20	3.54
366	86708	1981202	40.2043	28.8986	10.40	9.40	3.70	4.04
366	91492	1982106	40.7846	29.8128	19.70	10.50	41.50	8.34
366	105389	1984021	39.3993	26.2845	16.30	10.70	95.80	6.08
366	121084	1985277	39.1517	26.1772	14.90	14.00	154.40	7.00
366	141625	1987300	40.4288	28.4363	11.60	7.30	132.70	7.58
366	146572	1988115	40.8358	28.2346	12.00	7.60	127.90	12.03
366	154124	1989027	40.3475	29.2821	12.60	10.10	131.00	9.28
366	160471	1989227	39.1606	26.3371	14.60	11.10	62.20	5.43
366	172953	1990256	39.5398	28.5597	14.20	10.70	28.00	1.22
366	178314	1991062	40.6152	28.9886	8.50	7.80	171.90	8.08
366	179829	1991108	39.2489	26.5931	11.70	9.40	0.80	1.73
366	190021	1992061	39.0186	26.0074	14.10	11.70	97.20	10.59
366	190023	1992061	39.0249	26.0311	17.90	11.60	115.00	4.20
366	190764	1992082	40.1869	28.2977	9.30	7.70	170.60	10.05
366	204061	1993077	40.4156	28.0305	11.10	7.60	172.00	1.07
366	204062	1993077	40.4511	28.0036	13.20	10.90	174.40	2.73
366	207515	1993157	39.3870	28.2600	15.10	12.00	46.10	21.81
366	217615	1994052	40.2140	29.3420	11.70	9.50	81.60	2.43
366	238964	1995135	39.4709	26.2393	14.40	10.10	85.40	6.05
366	244537	1995231	40.2013	29.6309	14.80	8.00	4.40	2.96
366	260478	1996120	39.0193	29.7392	13.30	9.80	105.30	7.81
366	272500	1996305	40.4114	28.6621	9.80	7.20	164.30	7.69
366	278615	1997049	39.4608	26.3406	10.80	8.80	70.60	6.06
366	283580	1997122	39.6204	28.5945	13.00	9.20	103.60	1.78
366	293087	1997291	39.8245	28.6908	9.90	7.60	113.90	5.11
367	39818	1973152	41.3267	44.0000	9.20	7.80	70.30	10.37
367	89983	1982024	41.9896	43.3866	11.20	8.90	106.00	6.46
367	103230	1983288	41.7469	43.7538	9.50	7.50	34.30	5.96
367	105326	1984019	41.3119	43.7994	7.80	6.80	41.30	10.24
367	127375	1986133	41.4138	43.7338	8.40	6.70	61.90	2.69
367	152752	1988342	40.8721	44.2204	9.20	8.10	23.00	9.99
368	172941	1990256	38.0237	21.7923	11.30	11.30	71.30	8.04
369	169923	1990164	37.0290	28.0202	11.40	10.80	22.20	3.69
369	258856	1996093	37.9282	26.7803	11.80	10.00	101.70	11.45
369	258868	1996093	37.9400	26.7721	13.20	9.80	99.00	8.16
373	110514	1984237	32.6901	35.1486	13.70	9.50	103.40	5.43
373	114685	1985025	31.9141	35.5372	10.50	6.00	119.60	2.55

373	153478	1989003	32.4426	35.5085	8.50	5.90	71.00	4.78
373	178251	1991060	32.7339	35.1396	7.80	5.90	111.90	0.54
373	182166	1991175	31.5548	35.4996	7.10	4.00	107.40	1.07
373	184481	1991248	31.3049	35.5793	7.00	4.40	113.30	1.90
373	185163	1991271	31.0838	35.5609	6.80	4.80	114.60	3.16
373	188059	1991363	32.0943	35.3326	7.80	4.70	92.10	3.83
373	188451	1992011	31.2453	35.3873	7.50	4.40	125.00	1.99
373	191920	1992114	31.6550	35.7188	8.30	4.50	98.70	1.84
373	194286	1992178	31.0764	35.4906	8.30	4.60	107.60	0.95
373	197173	1992251	31.2909	35.5663	7.30	3.90	113.20	0.96
373	197301	1992254	31.9034	35.1088	7.20	4.10	102.50	2.15
373	198244	1992281	30.5314	35.2604	7.40	5.00	90.40	1.48
373	198252	1992282	31.3103	35.3650	5.90	4.10	107.10	1.60
373	204379	1993085	32.1545	35.2796	10.70	4.50	99.90	2.78
373	209872	1993214	31.5060	35.4132	7.10	3.70	103.80	11.11
373	213498	1993308	31.4363	35.5404	7.70	4.00	109.50	3.97
373	243844	1995220	32.4107	35.5464	8.00	5.00	91.00	0.82
373	261219	1996131	30.3379	35.1242	7.50	4.60	90.00	1.32
373	261902	1996143	32.1440	35.5414	8.00	4.60	93.30	0.52
373	271344	1996289	30.4824	35.1012	6.90	4.60	79.70	2.19
373	271345	1996289	30.4900	35.1108	7.40	5.60	67.20	0.12
373	271605	1996292	30.4781	35.1051	8.00	4.60	85.10	2.40
373	284665	1997138	32.7570	35.3442	7.80	7.50	73.30	2.86
374	147095	1988135	33.1609	35.6438	12.20	8.30	118.80	3.73
374	184845	1991259	33.0812	35.6567	10.40	8.60	129.20	1.72
374	237649	1995116	34.1275	35.5866	12.40	8.60	126.30	2.18
374	270066	1996271	33.0112	35.6074	9.10	7.80	162.80	1.69
374	274591	1996338	33.7153	35.4812	21.20	8.40	105.70	3.15
376	238308	1995126	38.5893	-8.0291	21.40	10.60	99.30	3.85
376	261753	1996141	37.3547	-8.5125	15.30	8.90	32.90	0.98
376	264082	1996177	40.0430	-7.7685	12.40	8.20	84.50	5.42
376	265337	1996199	37.3426	-8.4750	11.30	7.60	34.80	2.47
376	268196	1996243	38.4330	-8.0663	14.30	9.60	71.90	4.03
376	281342	1997088	37.4223	-7.9722	11.00	8.50	22.20	1.14
376	282374	1997104	37.3526	-8.4107	12.00	9.10	29.30	0.75
376	285908	1997162	37.4708	-7.7257	10.60	8.20	7.50	3.01
376	285983	1997164	41.2439	-7.5232	16.50	9.50	90.30	2.82
377	150050	1988233	37.1962	-3.7441	13.20	7.40	162.70	6.35
377	174576	1990311	36.9864	-3.7212	7.70	7.00	146.60	4.21
377	204208	1993080	37.0947	-3.5241	9.60	8.10	117.10	0.65
377	215251	1993356	37.0126	-3.9174	8.20	6.20	161.80	3.33
377	215828	1994008	37.0695	-3.8843	9.10	6.30	173.40	3.39
377	235494	1995076	37.1989	-3.7683	7.90	6.30	157.60	1.68
377	246559	1995271	36.9721	-3.7410	9.70	7.30	3.80	11.76
377	253792	1996009	37.0821	-3.9117	8.50	5.80	180.00	3.43
377	275944	1996363	37.1645	-3.7079	7.70	5.70	154.60	4.12
377	278915	1997055	37.0498	-3.8095	8.10	6.00	163.20	2.89
377	281499	1997090	37.0777	-3.8952	10.20	6.60	5.10	4.04
377	282613	1997107	37.0544	-4.2016	8.80	6.60	159.50	3.09
377	282621	1997107	37.0413	-4.2025	8.60	6.40	157.00	1.29
377	285773	1997159	37.0192	-5.4021	10.80	7.30	156.70	2.97
377	295402	1997332	37.0407	-5.3312	10.50	6.90	163.50	4.51
377	295440	1997333	37.0463	-5.3342	10.10	6.60	162.90	2.47
377	300834	1998102	37.1928	-4.2100	10.40	9.00	30.10	2.11

377	300968	1998103	37.2116	-4.2097	8.40	7.40	178.90	3.30
377	301031	1998104	37.2171	-4.2130	8.10	7.40	5.90	1.49
377	301854	1998127	37.0574	-3.9360	9.30	6.00	175.20	1.73
377	309968	1999033	38.1078	-1.5027	11.60	10.70	68.50	6.80
377	309990	1999034	38.0804	-1.5242	11.70	10.50	50.60	0.34
377	310233	1999042	37.0396	-3.6724	8.80	6.60	159.40	0.93
377	313983	1999158	37.2310	-3.6907	6.40	5.40	151.60	0.24
378	157728	1989150	43.1492	-0.3160	11.50	7.20	12.70	7.84
378	169900	1990163	43.1410	-0.3007	11.90	7.00	14.00	9.68
378	181746	1991164	43.0486	-0.0267	9.10	4.40	18.50	8.72
378	190659	1992079	42.2145	2.0493	6.80	5.60	40.50	5.35
378	217344	1994044	43.0686	-0.7057	5.40	4.70	4.50	8.38
378	224302	1994229	42.8959	-0.2460	9.10	5.50	9.80	8.28
378	233864	1995043	43.1664	-0.2149	11.50	4.90	9.70	3.54
378	253540	1996006	43.1431	-0.3031	10.70	5.40	10.20	5.13
378	256017	1996049	42.8077	2.5296	7.80	6.70	11.40	3.20
378	256019	1996049	42.7990	2.5317	8.50	7.20	161.20	5.76
378	256026	1996049	42.8344	2.5588	14.80	7.10	27.20	3.96
378	256134	1996050	42.8477	2.5897	8.40	8.20	15.30	8.49
378	257550	1996074	43.0665	-0.6423	6.00	5.40	17.30	17.03
378	261646	1996138	42.7565	0.9185	7.70	4.60	4.10	6.64
378	267353	1996228	42.8080	2.5624	7.70	7.20	85.20	9.52
378	270435	1996277	43.0263	-0.1636	8.20	5.20	21.20	8.79
378	272182	1996300	42.5302	0.2139	8.50	5.20	9.30	3.59
378	274336	1996334	43.0018	-0.2743	8.50	4.60	21.10	10.46
378	278302	1997043	42.6194	2.1941	9.00	6.10	30.10	6.21
378	285632	1997156	42.6873	2.0415	8.00	5.70	20.10	9.96
378	287110	1997183	42.6668	0.6703	11.20	4.30	15.50	1.92
378	289107	1997219	42.5707	2.7580	8.50	6.60	35.70	8.80
378	308105	1998332	43.1772	-0.1669	13.70	6.70	173.20	5.76
378	314092	1999162	43.2225	-0.5229	11.50	7.10	178.50	4.87
378	317234	1999277	42.9440	0.6576	16.40	6.80	7.10	7.67
379	171407	1990208	43.8912	7.8478	9.30	5.80	145.30	3.01
379	171810	1990221	44.0168	7.4084	5.70	4.40	130.50	2.91
379	172279	1990236	43.9304	7.2611	7.40	4.40	139.10	4.76
379	203932	1993074	43.8993	7.8542	8.30	4.80	152.10	4.59
379	217502	1994048	43.7172	6.2254	8.30	7.20	117.60	1.77
379	229296	1994328	43.8343	6.4423	6.50	4.00	161.90	3.48
379	237268	1995111	43.7758	7.5769	8.20	4.90	150.40	3.49
379	237313	1995111	43.7826	6.7374	7.60	5.60	144.20	3.27
379	255669	1996043	43.7984	7.4092	7.00	4.30	138.50	4.31
379	271570	1996291	43.9943	7.5629	7.10	4.80	135.70	1.54
379	276001	1996364	44.0147	7.5854	5.80	4.20	141.50	2.29
379	278094	1997039	43.6070	5.6238	7.50	6.40	25.40	5.86
379	286747	1997177	43.9853	7.3117	4.80	4.00	152.10	0.65
379	286752	1997177	43.9784	7.2969	4.90	4.10	141.00	2.88
379	287237	1997185	43.9783	7.3058	6.10	5.40	135.20	3.86
379	287484	1997189	43.7937	7.5606	9.60	5.20	146.20	6.27
379	287602	1997191	43.9855	7.2871	5.50	4.40	138.60	2.81
379	289564	1997228	43.9277	7.7250	7.40	5.00	144.30	1.73
379	290610	1997248	43.8603	7.7905	8.50	4.60	148.50	8.07
379	296519	1997344	43.7977	7.5633	9.00	4.90	147.00	5.91
379	298935	1998040	43.9475	4.9155	13.00	8.20	47.50	1.71
379	299493	1998058	43.8661	7.7720	10.10	5.40	138.10	7.71
379	304360	1998206	43.9723	7.1183	5.80	4.30	144.20	2.49

379	308573	1998349	43.9854	7.6281	6.20	4.60	142.30	3.45
379	318221	1999305	43.7626	7.3916	8.70	5.30	144.90	4.26
380	215030	1993350	44.0110	9.8401	9.80	6.60	2.40	1.97
380	264816	1996190	43.7151	8.1614	10.00	7.50	132.70	3.51
381	107654	1984120	43.1215	12.4254	12.90	6.60	42.10	10.51
381	164123	1989356	43.0008	12.6387	9.30	6.90	73.00	12.20
381	176874	1991014	43.7858	11.9179	11.30	6.70	51.20	4.14
381	201878	1993017	43.6022	12.1919	10.20	6.70	28.80	5.69
381	207428	1993155	43.1106	12.6911	12.40	6.40	74.40	2.34
381	207463	1993156	43.1083	12.6752	13.90	6.80	78.40	2.36
381	239957	1995150	43.4025	12.7326	10.00	6.90	61.70	10.06
381	291669	1997269	43.0191	12.8161	16.30	7.40	72.80	7.11
381	291738	1997269	42.9839	12.8549	17.30	8.20	73.50	2.43
381	292169	1997275	43.6063	12.1345	9.50	6.40	35.90	1.09
381	292173	1997275	43.6093	12.1249	9.70	6.40	36.10	2.62
381	292199	1997276	43.0093	12.7860	14.20	6.50	68.60	7.42
381	292359	1997278	43.6354	12.1418	9.60	6.80	32.80	3.43
381	292738	1997285	42.8614	12.8890	14.70	6.00	67.70	4.22
381	292837	1997287	42.8930	12.8406	14.60	6.50	71.30	4.97
381	292939	1997288	43.0054	12.8648	16.40	7.50	72.70	3.95
381	293482	1997298	42.7995	13.0388	9.50	6.00	69.70	1.74
381	294243	1997312	42.8609	13.0452	15.40	6.30	70.50	9.50
381	294312	1997313	42.8536	13.0731	16.30	6.40	69.30	11.54
381	294369	1997314	43.0449	12.8479	13.40	6.70	68.70	4.68
381	294765	1997321	43.0983	12.8731	10.40	7.00	82.50	4.12
381	295352	1997331	42.9400	12.8773	10.40	5.60	63.40	0.42
381	297639	1997365	42.8345	12.9881	10.30	5.70	64.50	4.18
381	298847	1998038	42.9704	12.7807	13.80	6.80	68.10	4.20
381	300556	1998093	43.1826	12.7983	12.70	7.20	86.50	8.95
383	122345	1985325	42.3126	19.9430	6.70	6.10	59.20	1.84
383	122388	1985326	42.3269	19.9339	6.40	5.90	52.10	5.43
383	122415	1985327	42.3081	19.9465	7.00	6.50	120.80	5.72
383	122416	1985327	42.3030	19.9439	6.80	6.30	102.00	2.53
383	122439	1985327	42.3195	19.9566	6.70	6.00	63.20	6.36
383	122475	1985328	42.3417	18.8819	7.30	6.80	42.70	5.05
383	122476	1985328	42.3376	18.9154	7.60	7.10	71.20	3.60
383	122481	1985328	42.3291	18.8874	7.20	6.80	32.30	3.64
383	122486	1985328	42.3381	18.8996	7.80	6.90	20.40	2.58
383	122519	1985329	42.3450	18.9106	7.20	6.80	30.50	4.31
383	122918	1985342	42.3149	19.9849	7.00	6.00	62.10	5.82
383	123272	1985355	42.2898	19.9840	6.70	6.20	60.00	3.80
383	123297	1985355	42.2929	19.9961	6.70	5.90	47.00	2.93
383	123522	1985361	42.3286	19.9476	6.50	6.10	73.90	1.57
383	123888	1986010	42.3228	19.9653	7.30	5.80	61.60	5.06
383	127043	1986124	42.3365	19.9758	6.60	5.60	46.40	5.96
383	156119	1989098	42.7915	18.7971	8.40	7.70	15.00	3.14
383	165222	1990031	41.3796	22.7150	7.30	6.70	140.60	2.33
383	168229	1990114	42.1349	19.2460	7.80	5.70	49.70	9.67
383	172617	1990246	45.9107	15.9056	15.20	8.70	165.40	3.07
383	191075	1992090	41.1201	21.0262	8.10	5.50	30.60	6.60
383	196768	1992239	42.3992	19.4210	7.50	6.10	28.10	1.85
383	199029	1992304	42.4259	19.1515	7.80	6.60	41.70	4.69
383	210363	1993225	42.8227	18.7547	10.50	8.60	167.20	6.74
383	217340	1994044	42.8377	19.1694	9.00	7.10	4.50	5.69

385	139078	1987192	36.6980	-5.8665	7.60	6.70	69.00	7.01
385	140294	1987242	36.8388	-5.5215	11.60	9.30	58.60	3.62
385	158242	1989167	36.8857	-5.2376	8.70	5.50	141.20	3.70
385	158258	1989167	36.8624	-5.2198	8.70	5.40	143.30	0.85
385	171119	1990199	36.6887	-6.2407	10.90	8.20	50.80	14.23
385	193779	1992165	36.5996	-5.6504	13.10	8.00	97.80	8.03
385	218025	1994064	36.9694	-4.3350	10.50	6.60	150.80	2.27
385	218908	1994088	36.6871	-3.3280	15.00	9.00	162.00	7.04
385	221941	1994166	35.1764	-3.8853	17.70	10.60	141.50	3.52
385	225085	1994249	36.8295	-5.3709	8.60	5.30	134.50	1.43
385	228340	1994312	36.9807	-2.3740	12.10	10.70	155.80	6.40
385	250224	1995322	36.9344	-2.5378	12.90	7.80	173.60	5.50
385	262897	1996161	35.0601	-4.0204	13.90	11.70	85.80	0.95
385	275782	1996360	36.6948	-5.3307	9.90	5.80	135.50	2.34
385	286418	1997172	36.6404	-5.5101	8.40	6.00	144.00	3.08
385	291648	1997268	36.4734	-5.3228	9.30	7.00	147.70	4.68
385	299399	1998055	36.8742	-4.5541	10.50	5.70	160.20	3.31
385	299494	1998058	36.8020	-5.7865	8.50	7.00	10.60	2.92
385	300935	1998103	37.0015	-4.5073	10.30	7.70	157.30	0.56
385	301242	1998109	37.0427	-2.3729	13.10	8.40	175.60	5.11
385	307858	1998322	36.9746	-3.7876	9.20	6.90	176.00	1.51
390	83139	1981015	40.7327	15.3161	15.30	7.90	59.80	9.39
390	83173	1981017	40.7020	15.3379	15.40	8.10	55.20	2.87
390	83249	1981020	40.6817	15.3778	13.00	8.00	63.70	1.52
390	83666	1981045	40.9919	14.5620	11.80	8.40	55.60	4.39
390	84674	1981087	40.6977	15.5328	11.70	6.90	43.90	5.21
390	108010	1984132	41.7349	13.8883	11.90	5.60	33.40	2.38
390	108018	1984132	41.7028	13.8421	12.40	5.80	33.30	8.01
390	108031	1984132	41.7128	13.8956	11.50	5.50	33.90	2.76
390	108042	1984132	41.6820	13.8593	11.50	5.40	37.70	1.90
390	108059	1984132	41.6812	13.8912	11.30	5.40	36.30	4.75
390	108061	1984133	41.7577	13.9086	14.00	6.70	25.00	2.62
390	108073	1984133	41.6485	13.8627	10.90	5.40	39.20	3.50
390	108147	1984135	41.7460	13.8336	11.80	5.90	37.40	1.59
390	108972	1984171	41.6899	13.8798	11.50	5.40	35.00	4.01
390	109112	1984176	41.7896	13.8560	11.20	6.50	39.00	5.11
390	109281	1984183	41.7163	13.9236	13.50	6.50	37.10	2.99
390	115888	1985073	41.6131	14.2892	9.70	6.90	33.40	1.46
390	143559	1988008	40.0248	15.9629	9.60	6.30	56.80	1.99
390	233287	1995032	40.8607	15.4026	11.10	7.50	43.80	10.11
390	240782	1995164	40.6889	15.3820	13.80	7.10	47.00	2.53
390	243861	1995220	39.7406	16.5264	9.60	8.40	109.30	2.39
390	280679	1997078	41.4303	14.6332	11.80	6.80	20.00	2.66
390	287459	1997189	39.2398	16.3998	15.80	6.60	105.30	7.30
390	299116	1998046	41.7849	15.9318	15.80	10.10	22.90	6.58
390	306151	1998266	40.0066	16.0101	12.00	9.80	68.90	15.23
391	67376	1978230	41.7920	20.3635	10.20	7.90	77.20	6.45
391	74764	1979294	41.1686	20.1207	11.40	7.80	86.70	11.31
391	75030	1979312	41.1207	19.7986	13.10	8.50	92.10	8.40
391	80027	1980201	41.4429	20.3817	10.00	7.50	95.70	4.77
391	104767	1983359	41.9244	19.1333	12.50	8.10	48.80	1.38
391	114479	1985016	40.6767	19.2526	9.40	7.90	135.40	1.28
391	123996	1986013	41.2727	19.6643	9.70	5.60	67.00	5.51
391	125226	1986062	41.9296	20.2841	7.60	5.60	46.10	6.39

391	128141	1986158	41.2370	19.7115	10.60	6.00	74.60	3.80
391	128672	1986177	41.2371	19.7387	9.90	6.00	71.70	4.05
391	135101	1987044	40.2112	20.0216	9.00	6.40	57.30	7.87
391	143572	1988009	41.2230	19.7860	10.10	5.30	73.70	2.91
391	143582	1988009	41.2263	19.8341	9.80	5.30	72.50	7.42
391	145778	1988086	40.1261	20.0196	10.20	7.40	63.80	6.02
391	151373	1988288	40.1860	19.8712	11.80	7.80	61.40	11.33
391	155476	1989076	41.2483	20.0153	8.00	5.40	71.50	9.91
391	159600	1989195	41.9547	20.1003	7.10	5.70	45.10	3.60
391	161554	1989267	41.3008	19.6019	9.80	5.40	71.40	6.65
391	168289	1990116	40.9757	19.8671	9.30	5.40	76.40	4.92
391	168981	1990134	40.6386	19.9600	7.70	6.50	77.50	10.67
391	178730	1991075	41.4796	19.5840	9.10	5.20	66.80	5.78
391	192393	1992129	40.0583	19.7914	8.70	6.80	78.00	3.04
391	215312	1993358	40.1618	19.8612	7.80	6.40	78.90	6.25
391	221216	1994150	40.1053	19.7312	8.10	6.50	54.20	4.32
391	276673	1997012	40.7310	19.8757	7.40	5.60	75.70	10.73
392	86348	1981183	39.4531	20.7441	11.40	9.80	86.20	13.74
392	86380	1981184	39.4327	20.7705	11.70	9.10	83.80	11.42
392	93514	1982216	39.6884	20.6361	15.00	8.60	25.10	7.69
392	97917	1983067	39.7539	20.3435	13.10	7.60	31.30	8.37
392	100756	1983183	40.8323	20.7584	8.10	6.60	74.70	2.72
392	100757	1983183	40.8009	20.7663	8.50	6.70	76.10	5.81
392	104834	1983362	40.8457	20.8321	7.00	6.10	77.90	1.92
392	108368	1984145	40.0107	20.2248	8.40	8.30	4.40	9.18
392	109544	1984194	40.8578	20.4851	7.30	6.30	42.60	6.42
392	112898	1984323	39.7072	20.6604	12.20	6.70	35.70	9.05
392	116695	1985106	39.7684	20.7363	10.80	7.20	40.40	11.64
392	116696	1985106	39.7803	20.7635	11.80	8.20	60.90	6.84
392	121669	1985300	39.9924	20.7954	9.60	7.20	14.50	1.15
392	134209	1987007	40.4082	20.6950	7.30	6.90	94.40	3.27
392	160101	1989214	40.7587	20.2433	6.80	5.70	78.40	9.72
392	196223	1992226	40.9541	21.0005	7.10	5.90	40.00	5.29
392	229984	1994343	40.8653	20.8335	6.10	5.70	94.80	4.35
392	238445	1995129	40.7441	20.8418	7.10	6.00	126.10	2.00
392	265950	1996208	40.0202	20.7068	6.80	6.40	12.10	6.21
392	266594	1996218	40.0422	20.6827	7.30	6.60	16.90	3.97
392	267025	1996224	40.0263	20.7616	7.30	6.60	20.60	5.26
392	267630	1996233	40.0228	20.7210	7.40	6.30	15.50	6.71
392	269991	1996270	40.0299	20.7968	7.90	7.00	26.10	5.08
392	274585	1996338	39.9634	20.2453	9.20	7.20	48.60	16.54
392	295249	1997329	40.2616	20.2502	7.70	6.70	158.20	11.52
395	224692	1994239	34.9721	-3.7095	11.90	9.40	155.10	1.33
395	225207	1994251	34.8154	-5.4852	12.80	7.50	63.30	3.96
395	233184	1995030	34.8753	-4.0726	13.60	9.60	156.80	4.75
395	235716	1995081	34.8931	-4.0581	14.50	11.40	145.70	2.03
395	258894	1996094	34.1843	-4.7604	16.40	9.00	129.30	5.62
398	147725	1988157	38.4202	14.7145	10.80	7.80	159.60	1.63
398	160933	1989245	37.8540	14.7394	12.30	7.60	158.40	4.79
398	178911	1991080	37.7539	13.8426	13.90	10.60	152.10	14.68
398	184948	1991263	37.5800	14.8458	9.70	8.70	136.60	4.23
398	185961	1991296	37.7731	15.0216	11.60	9.80	134.50	4.65
398	191331	1992097	37.8448	14.5745	10.50	7.50	152.90	4.09
398	197897	1992271	37.7927	14.6905	12.10	8.40	160.10	4.54

398	197899	1992271	37.8085	14.6916	15.50	9.10	163.60	3.49
398	197918	1992271	37.7937	14.6864	15.40	9.10	163.70	2.40
398	212655	1993285	37.8199	14.9168	15.00	7.30	157.20	2.07
398	244967	1995239	38.2661	15.2185	16.10	6.70	144.60	2.80
398	246987	1995276	38.0790	14.1105	12.40	8.60	179.50	2.77
398	265106	1996196	37.8099	14.9265	15.20	7.70	156.30	0.06
398	267284	1996227	37.7998	14.9497	12.10	7.60	151.60	5.76
398	267313	1996228	37.7946	14.9316	14.50	8.20	156.90	2.95
398	275148	1996349	37.8676	13.8827	12.60	7.20	159.40	6.63
533	146543	1988114	55.0025	-2.8481	11.40	9.10	64.40	3.72
533	166332	1990063	52.9969	-2.2241	12.10	8.80	170.80	5.37
533	195715	1992211	53.1332	-4.3874	7.80	6.20	85.20	3.04
533	196360	1992230	51.6755	-3.2647	10.10	8.80	113.50	8.81
533	217214	1994041	53.2173	-4.1142	11.10	6.40	76.80	3.92
533	218490	1994076	52.5413	-3.4466	7.80	6.60	26.00	9.19
533	224282	1994229	57.1912	-5.7114	14.00	11.30	179.80	1.74
533	234368	1995053	52.9817	-2.3085	10.50	6.60	139.50	0.66
533	260956	1996127	53.0218	-2.2302	9.20	6.90	148.40	6.56
533	269537	1996264	52.3380	-3.3092	11.80	7.70	36.80	7.38
533	278219	1997041	53.1868	-1.5254	12.70	8.30	70.30	6.59
533	307247	1998303	51.8259	-4.5068	12.10	8.90	27.40	1.34
535	143218	1987360	59.8298	6.4819	12.70	7.30	77.60	1.57
535	151546	1988294	59.9180	6.3305	17.40	8.60	75.50	3.37
535	157781	1989152	60.7130	5.5678	14.10	7.70	92.40	1.64
535	157998	1989158	60.7049	5.5695	14.10	7.70	92.50	4.43
535	161240	1989257	60.7289	5.5676	14.60	7.70	91.90	4.01
535	185356	1991277	60.4937	4.5957	15.00	9.10	76.70	5.02
535	248007	1995287	60.2571	5.4045	11.20	8.30	65.60	2.84
538	113972	1984364	48.0986	6.5953	9.90	7.80	158.70	5.27
538	153570	1989006	43.0286	0.1634	12.10	5.40	11.40	0.85
538	163819	1989347	44.8067	6.8087	6.70	4.00	88.10	2.09
538	177741	1991042	44.8688	6.7920	6.20	3.90	84.60	3.81
538	177792	1991044	44.8831	6.8141	6.50	3.90	85.00	0.39
538	177796	1991044	44.8774	6.7967	6.00	3.90	83.50	2.39
538	199116	1992306	44.6369	6.8167	5.60	4.00	97.10	1.65
538	214516	1993337	44.7364	6.7745	7.10	4.10	83.10	1.38
538	247542	1995281	44.5112	6.9045	4.70	4.40	54.80	2.41
538	247990	1995286	44.5064	6.8742	4.80	4.20	99.80	1.86
538	248147	1995289	44.8070	6.8620	6.60	4.50	87.30	2.48
538	256038	1996049	44.7643	6.8034	5.30	3.70	86.10	5.14
538	259796	1996109	44.2506	6.8968	4.50	3.90	81.30	0.79
538	263074	1996163	44.6453	6.7699	5.40	3.90	83.60	0.57
538	270782	1996283	45.9708	6.8798	7.30	4.70	103.60	4.95
538	275048	1996347	43.0551	0.1391	10.80	4.80	8.10	3.44
538	277873	1997035	42.9774	0.2478	8.90	4.30	16.90	6.86
538	278785	1997052	44.8166	6.6977	5.70	4.30	70.90	0.84
538	278786	1997052	44.8240	6.7097	5.70	4.30	69.90	1.33
538	284428	1997135	45.2026	6.6948	5.50	4.00	90.00	2.82
538	290271	1997242	44.7244	6.6936	6.30	4.40	82.90	1.02
538	291048	1997256	44.7539	6.8011	5.50	4.10	81.90	0.49
538	300378	1998087	48.0192	6.5176	6.50	6.30	165.00	4.46
538	310009	1999034	45.0394	5.7004	7.50	5.80	37.30	3.84
541	165427	1990038	50.4475	6.0049	12.80	9.50	66.30	3.62

541	166100	1990055	50.4446	6.0168	10.40	8.50	86.50	3.56
541	183585	1991222	50.6935	5.6478	14.50	8.10	179.40	2.48
541	249254	1995303	50.5173	5.8955	13.70	10.10	4.50	3.49
541	265797	1996205	50.4735	5.8901	12.10	7.40	2.00	6.28
543	44397	1974132	48.2869	9.0125	12.20	7.30	105.80	4.64
543	63962	1978016	48.2785	8.9798	8.00	7.00	47.40	2.33
543	103956	1983322	50.5792	7.2449	11.70	7.40	36.70	12.04
543	134729	1987029	47.4523	9.2870	8.40	6.80	35.50	3.60
543	141681	1987301	47.1008	9.1708	7.10	6.10	67.00	5.88
543	141751	1987305	47.2595	9.6008	10.60	6.40	21.40	7.13
543	142108	1987321	47.1491	9.3418	7.80	6.40	70.70	2.88
543	155388	1989072	50.6883	9.9903	9.30	7.70	177.90	7.32
543	155971	1989092	47.1377	9.0784	7.40	6.20	57.70	8.23
543	161782	1989277	49.1357	8.4508	10.80	7.90	107.70	9.09
543	169438	1990149	50.0926	8.6246	16.40	11.80	72.70	3.19
543	191588	1992105	50.9426	6.1571	10.50	8.10	166.50	11.00
543	232749	1995022	48.1253	8.5803	8.70	7.10	60.20	6.24
543	234574	1995056	48.1067	8.5214	9.40	6.60	86.80	3.22
543	257106	1996066	50.7387	6.2687	9.70	7.50	20.70	13.09
543	262261	1996150	49.9577	7.4369	9.10	6.70	52.20	7.00
543	293283	1997294	48.7830	9.7015	6.90	5.20	169.40	4.64
543	294816	1997322	47.1133	9.1450	6.00	5.20	51.90	2.01
543	295465	1997333	50.2553	8.2774	8.60	7.40	28.00	6.41
543	295485	1997333	50.2476	8.2805	8.90	7.30	23.70	5.95
543	300210	1998082	47.1364	9.1219	6.10	5.60	40.00	3.96
543	304406	1998208	48.3240	8.9860	6.80	6.10	126.10	1.88
543	316596	1999255	48.6020	8.2309	6.30	5.60	103.70	6.03
543	317453	1999287	47.3300	10.0109	7.00	5.20	167.60	3.41
543	318085	1999301	47.3401	9.9710	7.30	5.30	169.40	3.14
544	79914	1980197	47.6886	7.4288	9.50	7.60	51.50	2.86
544	110838	1984249	47.3130	8.5336	10.40	6.00	57.40	8.22
544	125146	1986058	47.7050	8.8923	9.10	6.10	53.70	5.59
544	161692	1989273	46.3639	7.3819	7.50	5.10	94.90	2.22
544	186764	1991324	46.7221	9.5215	7.10	6.40	173.70	4.98
544	189639	1992048	46.7353	9.5491	6.90	6.20	165.20	7.47
544	190983	1992088	46.7486	9.5320	6.80	6.00	172.40	7.14
544	201211	1992365	47.7299	8.3437	7.80	5.50	55.30	5.84
544	224701	1994240	46.9054	8.7176	6.60	5.20	51.70	2.87
544	241473	1995176	47.6420	8.7650	7.60	6.40	54.40	5.37
544	264214	1996180	47.7637	8.6921	5.30	4.90	169.00	10.07
544	267249	1996227	46.3593	7.5313	5.70	4.50	95.60	4.45
544	267852	1996236	46.8022	9.7766	6.20	5.20	154.60	3.28
544	267932	1996237	47.9579	7.5033	5.60	5.20	164.70	15.05
544	269233	1996258	46.0843	6.8177	7.00	4.40	111.10	0.65
544	275802	1996360	46.2162	7.2094	6.10	4.60	111.80	3.14
544	277718	1997032	47.6827	7.4544	5.50	5.00	109.60	10.60
544	283315	1997117	46.1811	7.7352	6.00	4.90	102.10	2.63
544	288814	1997213	46.5689	7.2656	7.20	4.80	94.50	4.34
544	295342	1997331	46.1807	6.8818	7.00	4.60	101.60	6.49
544	300451	1998089	46.6223	7.3114	7.10	4.70	98.80	6.76
544	301849	1998127	46.1091	7.3908	6.70	4.80	108.60	4.01
544	308425	1998343	46.1737	7.5531	6.50	4.70	106.80	2.34
544	313182	1999134	46.7830	7.9785	6.30	4.90	105.70	3.00
544	319832	1999363	46.1499	6.9120	8.10	6.00	124.10	3.06

545	76022	1980005	44.9026	7.3349	12.70	9.90	92.90	15.74
545	101229	1983202	45.8271	11.3560	11.50	5.90	173.60	5.04
545	130544	1986241	46.3218	12.5099	6.20	4.10	178.80	2.21
545	137895	1987144	45.7019	10.6892	8.30	5.20	158.10	5.75
545	144453	1988039	44.1647	10.4989	10.50	9.40	55.60	1.61
545	144457	1988039	44.1747	10.5442	9.50	9.00	108.70	0.09
545	196342	1992229	44.4979	7.2383	5.90	4.10	89.90	2.79
545	203962	1993074	44.3888	7.3302	5.10	4.10	88.20	2.10
545	207827	1993165	45.9534	8.2345	7.60	5.40	121.20	1.84
545	209225	1993198	44.2341	8.2513	8.00	5.10	143.40	3.99
545	209235	1993198	44.2415	8.2539	7.90	5.00	139.10	6.24
545	209279	1993198	44.2072	8.2894	8.00	5.30	152.50	3.86
545	216372	1994020	44.5700	7.3230	5.80	4.10	79.80	2.96
545	216374	1994020	44.5769	7.3272	5.90	4.30	78.10	3.42
545	244795	1995236	44.1016	10.7125	12.20	6.40	15.10	1.46
545	250377	1995325	45.0517	7.5925	6.00	4.00	101.40	5.75
545	258702	1996091	45.9024	7.4752	5.60	4.30	112.70	5.31
545	264986	1996193	44.1115	9.9824	10.20	5.40	13.80	0.99
545	274066	1996329	44.0543	7.6745	5.80	4.20	151.60	3.01
545	274156	1996330	44.1304	8.5655	8.00	4.80	162.00	2.57
545	282290	1997102	46.5650	10.4752	7.30	5.40	158.70	0.81
545	287555	1997190	44.1047	10.6279	10.80	6.60	23.50	4.89
545	297279	1997358	44.1048	10.4915	10.40	6.30	27.00	1.21
545	297387	1997360	44.0975	10.4494	10.70	6.30	28.30	5.05
545	309706	1999025	44.0128	11.9933	16.00	12.60	38.40	7.64
546	71345	1979108	46.3008	13.3165	10.80	8.50	138.00	5.62
546	97421	1983041	46.2699	13.3876	6.60	6.00	7.30	3.42
546	106171	1984057	47.3055	11.5394	7.60	5.90	26.40	5.30
546	131511	1986279	46.3225	13.0450	6.60	5.30	171.40	2.34
546	144253	1988032	46.3194	13.1016	6.30	4.60	1.30	1.20
546	144343	1988035	46.3040	13.1286	7.70	5.20	4.60	1.41
546	159717	1989199	47.5228	13.0612	10.10	7.70	67.10	5.55
546	172166	1990232	47.1125	11.3301	8.10	6.30	163.00	5.03
546	205740	1993122	47.3583	11.7417	11.70	7.00	3.00	2.65
546	214485	1993336	47.2798	10.6775	8.40	5.80	173.90	2.62
546	265283	1996199	47.1324	11.5132	5.90	5.80	43.00	7.07
546	265284	1996199	47.1613	11.5317	6.30	5.70	0.00	9.14
546	270440	1996277	47.3661	11.8882	8.00	6.50	166.10	1.18
546	287709	1997193	47.1535	11.3703	6.90	5.20	3.60	2.29
546	293170	1997292	47.3450	11.8277	8.30	7.30	67.40	8.23
546	296386	1997343	46.3629	13.2580	8.10	5.70	22.60	4.32
546	301123	1998105	46.2571	13.7713	9.10	6.10	34.10	5.37
546	301128	1998105	46.2815	13.6986	9.80	6.50	29.00	5.57
546	301813	1998126	46.2519	13.7401	8.60	5.80	34.70	2.33
546	302013	1998131	46.2703	13.8042	10.20	6.90	49.60	6.52
546	306046	1998263	47.2890	11.3175	10.00	5.90	179.80	5.66
546	308003	1998328	46.2478	13.7196	7.70	5.10	31.50	6.95
546	311780	1999090	47.8563	14.2583	9.70	6.00	63.60	6.90
546	313141	1999133	46.2564	13.6379	6.40	4.60	9.90	11.38
547	227749	1994300	49.7807	18.4898	14.90	8.10	15.10	2.36
547	227952	1994304	49.7782	18.4635	13.10	8.10	16.80	6.17
547	278544	1997047	49.8131	18.4715	16.00	10.60	2.00	1.53
553	253462	1996004	28.6840	34.8175	28.10	9.20	83.20	16.81
553	254026	1996013	29.0478	35.0491	13.80	8.40	112.00	8.00

553	264570	1996185	29.2275	34.8392	9.60	5.50	98.30	6.26
553	271862	1996295	28.8607	34.8986	13.70	7.30	101.10	0.71
555	234130	1995048	29.7249	34.9826	9.00	5.10	70.00	3.21
555	252599	1995357	29.2930	34.9048	21.90	11.70	39.00	46.62
555	254536	1996022	29.2988	34.7337	20.50	9.30	96.00	44.13
555	254548	1996023	29.1771	34.7731	20.30	9.60	95.30	37.26
555	255057	1996033	28.9089	35.0990	15.50	10.10	106.10	47.70
555	290254	1997242	28.9824	35.1239	14.50	8.40	105.30	9.13
715	123075	1985349	38.8159	69.8823	10.30	6.90	147.70	4.51
715	154012	1989022	38.5021	68.6719	11.90	9.90	74.80	3.22
717	119758	1985227	38.9171	70.4241	16.10	9.60	128.10	13.90
717	135348	1987054	38.9655	70.5519	14.00	7.70	148.40	9.16
717	139227	1987198	38.9197	70.5628	14.20	8.60	153.90	8.04
717	142007	1987316	38.9579	70.3065	12.80	6.80	133.80	8.91